PALOMAR

The Telescope Automation

User Manual Rev. 1.5.1
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INTRODUCTION

Besides being the name of a famous observatory, PALOMAR is the name of an advanced control system for equatorial telescopes through the use of stepper motors with micro-technique.

The first version of PALOMAR was marketed over ten years ago, with great success and it was widely spread in Italy. The strengths were flexibility, accuracy, compactness and a good price.

The electronics make giant steps, so, for a few hundred dollars, you can find now computers you can place on a table while few years ago they occupied dozens of square meters of area and required a energy consumption in large quantities.
Now, in consumer electronics you can access to powerful processors at very low consumption.

For the new version of PALOMAR we have used a new 32-bit RISC processor with an operating frequency of 72 MHz compared to the (CISC) 8-bit, 12 MHz microprocessor used in the first version, turns out to be 200-300 times more potent.

The availability of so much computing power at low prices has given us the stimulus to build a new version of Palomar "without limits" at a reasonable cost.

Maintaining the original philosophy, the PALOMAR is a stand-alone system that does not need a PC to operate or to be configured.
It is thought to work on the field: where a PC crashes, PALOMAR still works.
Making astronomy often means working in hostile and uncomfortable environments. The basic philosophy is: where you resist, PALOMAR resists, too!

Do not be fooled by the small size of PALOMAR: it is able to drive motors with a torque of over 1N/m with currents over 2 effective amps per phase with peaks up to 2.8A, while maintaining a very low dissipation.

In practice, it means being able to drive even larger telescopes. If you add the fact that the engine has a fractionation up to 200000 steps / revolution, and a maximum position frequency of 75000 Hz, other than it also provides the control of encoders as feedback, well, then we can say that we have an ideal tool to automate our own telescope not giving up anything.

With this version it has also decided to make available a development system (optionally) for those who wants, starting from the current program, to make changes to the system software.

In the development system in addition to being provided with all the sources, it is also provided a work environment (IDE) that, in addition to the compiler and the linker, includes a text editor for C sources, the program for the binary download and so on.
To undertake this task, as well as buy the SDK, you should also know the C language and to know about spherical astronomy ...

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COMPOSITION OF THE SYSTEMS

BASE MODEL

PALOMAR
Main cable for power and connection to the motors
Auxiliary cable with connector for RS232 and joystick
USB-RS232 converter cable
CD-ROM
Plastic case

GPS MODEL

As Base model plus an integrated GPS
External magnetic antenna for GPS with SMA connector

SDK MODEL

As GPS model with the adding of 32Mb RAM memory.
CD-ROM complete of C sources and libraries

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OVERVIEW AND CONNECTORS

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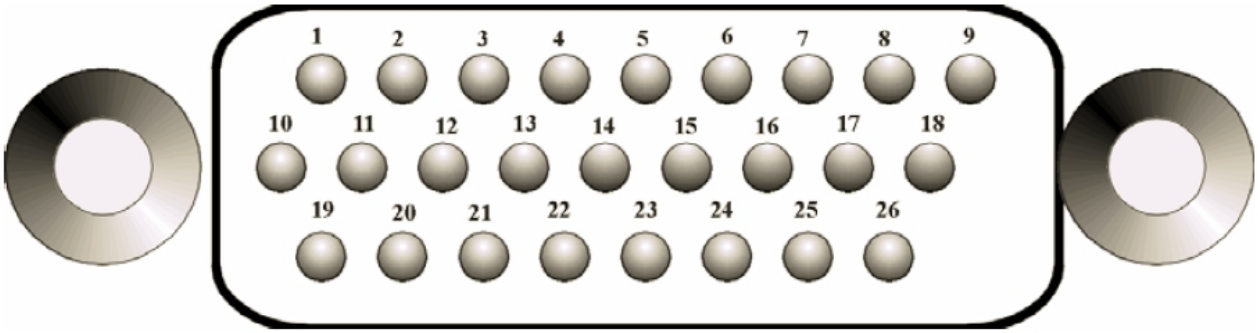
Detail of connector Y1 numeration and related signals



PIN	SIGNAL	DESCRIPTION
1,2,3,4,5	12-30V	DC feed from 12 to 30 volts
6,7,8,9,18	Ground	Ground and feedback
10,19	RA-1A	Coil 1A motor in right ascension
11,20	RA-1B	Coil 1B motor in right ascension
12,21	RA-2A	Coil 2A motor in right ascension
13,22	RA-2B	Coil 2B motor in right ascension
14,23	DE-1A	Coil 1A motor in declination
15,24	DE-2A	Coil 2A motor in declination
16,25	DE-1B	Coil 1B motor in declination
17,26	DE-2B	Coil 2B motor in declination

The specs are reported for a complete description of the product.
Remember DTA is at disposition to produce cables tailored on customer's requirements.

Warning: never insert this connector when the power supply in ON, or it can damage the device.

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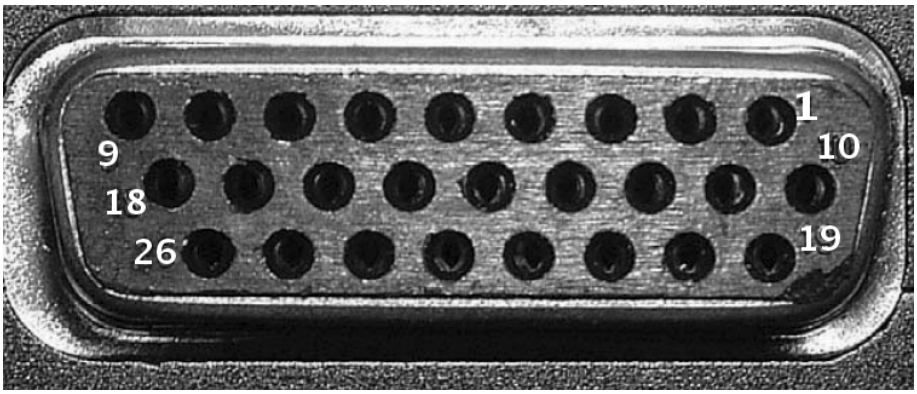
Detail of connector Y2 for input/output



PIN	SIGNAL	DESCRIPTION
1	OC1	45V 1A Open-collector output, used to trigger the camera during a sequence of slewing-image acquisition
2	+5V	Output at 5 volt 500mA for PALOMAR expansion peripherals
3	PO[1]	Amplified TTL output for expansion peripherals
4	PO[0]	Amplified TTL output for expansion peripherals
5	PO[3]	Amplified TTL output for expansion peripherals
6	PO[2]	Amplified TTL output for expansion peripherals
7	PI[1]	Amplified TTL input for expansion peripherals
8	PI[0]	Amplified TTL input for expansion peripherals
9	PI[3]	Amplified TTL input for expansion peripherals
10	PI[2]	Amplified TTL input for expansion peripherals
11	RX0	RS232 incoming data
12	TX0	RS232 transmitting data
13	DTR	RS232 signal reserved to PALOMAR program update
14	RTS	RS232 signal reserved to PALOMAR program update
15	ENC-0B	Opto-isolated input encoder phase B of right ascension
16	ENC-0A	Opto-isolated input encoder phase A of right ascension
17	ENC-1B	Opto-isolated input encoder phase B of declination
18	ENC-1A	Opto-isolated input encoder phase A of declination
19	FOI[1]	Opto-isolated input for warning of declination axis end stop
20	FOI[0]	Opto-isolated input for warning of right ascension axis end stop
21	OI[1]	Opto-isolated input auto-guide or joystick
22	OI[0]	Opto-isolated input auto-guide or joystick
23	OI[3]	Opto-isolated input auto-guide or joystick
24	OI[2]	Opto-isolated input auto-guide or joystick
25	GND	Ground
26	ORET	Ground-return for opto-isolators

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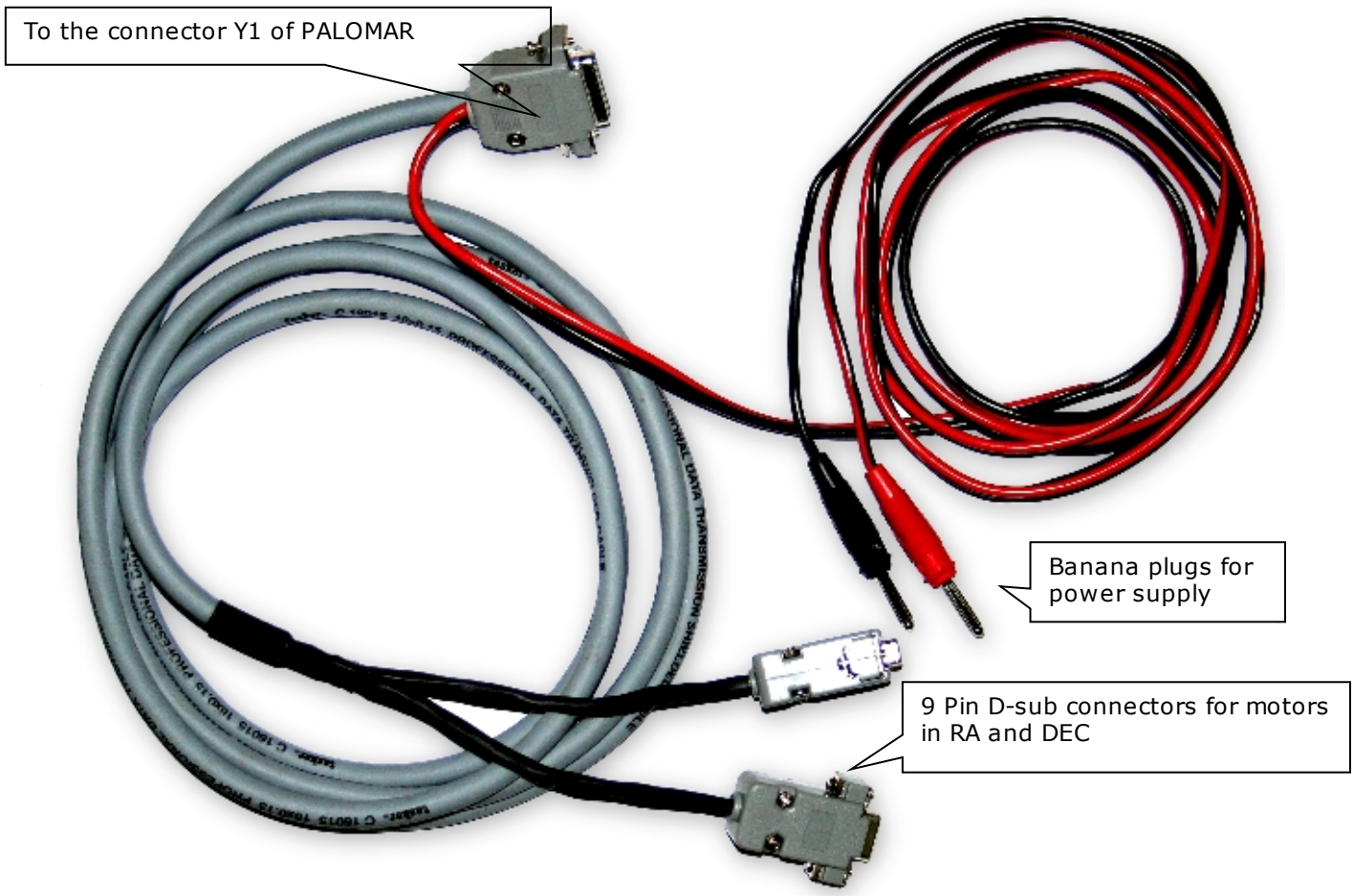
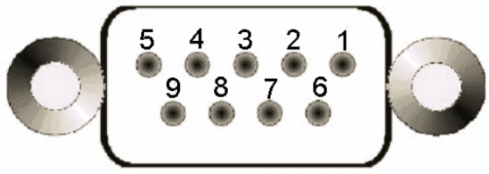
Standard 2m cable for power supply and motors



Detail of female 9Pin D-sub connectors. A connector for each axis.



PIN	SIGNAL	DESCRIPTION
1,6	1A	Coil A
2,7	2A	Coil A
3,8	1B	Coil B
4,9	2B	Coil B

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SERIAL CABLE AND JOYSTICK/AUTOGUIDE SUPPLIED

26 Pin HD M	SIGNAL	JOYSTICK AUTOGUIDE 9 PIN Male	RS232 9 PIN Female
1	OC1		
2	+5V	8	
3	P4_27		
4	P4_26		
5	P4_29		
6	P4_28		
7	P1_27		
8	P1_26		
9	P1_29		
10	P1_28		
11	RX0		3
12	TX0		2
13	DTR		4
14	RTS		7
15	INO1		
16	INO0		
17	INO3		
18	INO2		
19	INO5		
20	INO4		
21	INO7	3	
22	INO6	4	
23	INO9	1	
24	INO8	2	
25	GND	6	5
26	COMOPTO	7	

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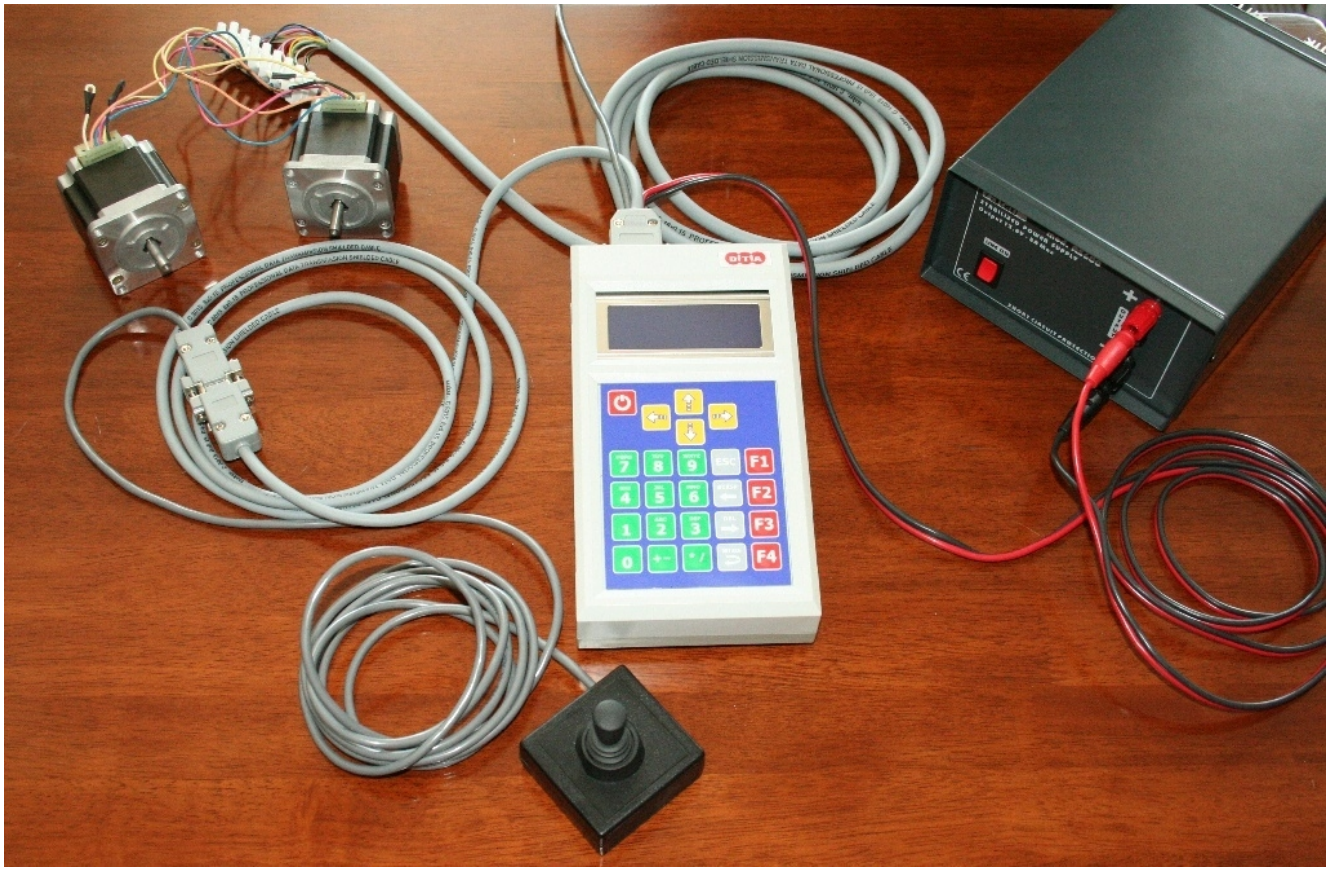
Picture of the system connected and fed



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POWER SUPPLY

You can feed the PALOMAR starting by a minimum voltage of 12 volt to a maximum one of 30 volt in direct current.
The maximum operating current the device can reach is 5 ampere, but the real absorption is never higher then 2 amperes (average value).
It may seems strange that a system managing two motors of 2.8 ampere per phase require such a low current. The answer is the PWM (Pulse Width Modulated): in practice, the motor phases are switched on and off tens of thousands of times per second, so that the average absorption drops significantly.
Below 12 volts, at exactly 9 volts, motor drivers stop to work, while at 40 volts some internal devices risk the damages, so you must stay in the specified range of voltage supplied:

12-30V

So, we can say the battery of the cari s perfect for your observations on the fiels and a 0-30V 5A variable power supply is perfect for your permanent observatory.
PALOMAR is protected against reverse polarity, it is absolutely immune from that, but it is a good habit to always connect the **red banana plug to the positive** and the **black banana plug to the negative** of the power supply or battery.
Maybe you are wondering what need is there to let work the PALOMAR at 18, 24 o 30 volts ... Legitimate question! The need is dictated by the stepper motors we are going to use and performances that we aim to get from our pointing system.
The most users expect, plus a high pointing accuracy, even a short waiting times for this to happen, this means, therefore, that the regime of rotation of the motors must be high.
The electronic of PALOMAR is able to generate very high operating frequencies (75KHz), but not always the motors can reach these high regime values.
Different causes affect this problem, most important are the high inductive load of the coils and the stray capacitance.
Higher the power supply, better the performances on the speed of the motors, so contrasting the excessive inductance of the coils.

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SOME GOOD RULES

PALOMAR has a number of protections that seek to prolong its life as much as possible; of course, their owners must try to use it in the best way, respecting the following advices:

- ➔ Connect and disconnect the motors when PALOMAR is off.
- ➔ Always leave the hole of the fan and the underlying slot free from obstructions.
- ➔ The system is designed to work in humid environments (see dew at night) but it is not an amphibian system!
- ➔ It works easily with an ambient temperature below zero, but it should be brought to room temperature gradually.
- ➔ It doesn't fear the sunlight, but do not complain if you see on the display that the temperature of the engine drivers has reached 85 ° C and these were automatically shut down waiting for cold weather!

In addition to those listed, there are no special instructions regarding the maintenance of the instrument. Remember, however, that the internal lithium battery life is 5 years.

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ON/OFF

To avoid the use of any kind of ON/OFF switch, we have chosen a more electronic than electromechanical method; in practice, a Power MOSFET is controlled by a key, then the CPU is the only one managing the ON/OFF procedures.

To start on the device, you must push the key:

for at least half second, then the opening window will appear.

There are advantages and disadvantages in letting the CPU decide when to start on and how to start off.
The advantage is that the CPU, before to start off, performs safety procedures relating to the shutdown and also saves the data.
More ever, an electronic switch is more reliable than an electromechanical one.
The disadvantage is that when we are going to update the management program, we have to hold this bottom for at least 2-3 minutes, that is time of downloading of the new program!
As for the starting on, to start off the PALOMAR we have to hold the bottom for at least 1 second, after then a shutdown message appears and we can release the bottom.

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CHOICE OF THE MOTORS

PALOMAR manage the phase current of the motors from 0 to 2A RMS (sometimes 2.8A) in continue mode, it is required the use of bipolar motors at 4, 6 or 8 wires.
For end users we recommend three different sizes of the motors tailored for PALOMAR, able to move from small to the big telescopes.
The word "small" or "big" is relative, of course; actually, we should talk more about friction and balance of the instrument, as even the engine more small can handle a big device, if this has contained friction and it is well balanced.
Roughly, we can check the quality of our telescope simply by manually turning the worm.
In fact, if it runs smoothly in every position that the telescope can take, this means that, apart from being balanced, has a very good mechanic; otherwise, you should first verify the balance and, subsequently, ensure that the worm is not overly pressed on gear.

As general advice, you should always put before the the worm an additional de-multiplier, preferably a belt and pulley type, to prevent any imbalances and / or hardening of the motion due, for example, to the decreasing of the temperature, which increases the viscosity of the lubricating grease of gears. On high quality mounts, you can directly mount the engine on the worm, **always** using a Unilat joint or similar.

UNILAT joint

You can buy these joints on: www.rswww.com

The table here below shows, approximately, the motor to be used in relation to the size of the telescope:

MOTOR	SIZE	MAX CURRENT (A)	TORQUE (N/m)	TELESCOPE (cm)
103H-548-04500	42	1	0.4	0÷20
103H-7123-0740	56-54	2.2	1.1	20÷40
103H-7126-0740	56-76	4	1.7	≥ 40

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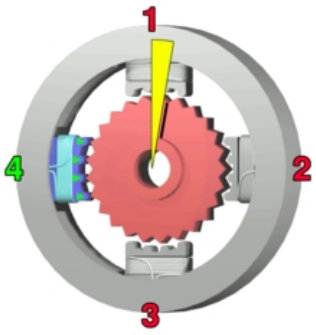
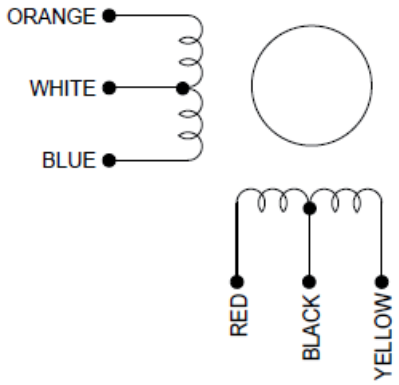
CONNECTION OF THE MOTORS



If you ordered the PALOMAR complete of motors or if you use a wekk known mount, you can avoid reading this chapter, otherwise let continue.
In the figure at side you can see the simplified structure of a stepper motor.
As you can see, it is composed by 4 coils that, properly fed, cause the rotation of the central permanent magnet and then of the shaft.
Depending on the brand and model of the motor, you can have 4 or 8 external wires, which are going to be opportunely connected to PALOMAR.
We furnish motors at 6 wires and the connection is as follows, depending on whether you connect them directly to high-density connector Y1 of the PALOMAR or on the D-sub connector of the standard supplied cable for power supply and motors:

Internal connection of the motor and color of the wires



Direct connection on 26PIN high-density connector Y1.
As you can see from the table, each wire is connected to 2 pins so to enhance the contact and increase the reliability.
When is possible (as in the case of standard supplied cable) let use shielded cable and connect the shield to pin 6; it reduces drastically the radio frequency emission eventually caused by the PWM of the motors.

PIN	SIGNAL	MOTOR	MOTOR WIRE COLOUR
10,19	1A	Right Ascension	Orange
11,20	2A	Right Ascension	Blue
12,21	1B	Right Ascension	Red
13,22	2B	Right Ascension	Yellow
14,23	1A	Declination	Orange
15,24	2A	Declination	Blue
16,25	1B	Declination	Red
17,26	2B	Declination	Yellow
6		GND	Shield of the cable

Connection to execute for each motor on the female 9PIN D-sub connector if you are using the standard supplied cable.

PIN	SIGNAL	MOTOR WIRE COLOUR
1,6	1A	Orange
2,7	2A	Blue
3,8	1B	Red
4,9	2B	Yellow

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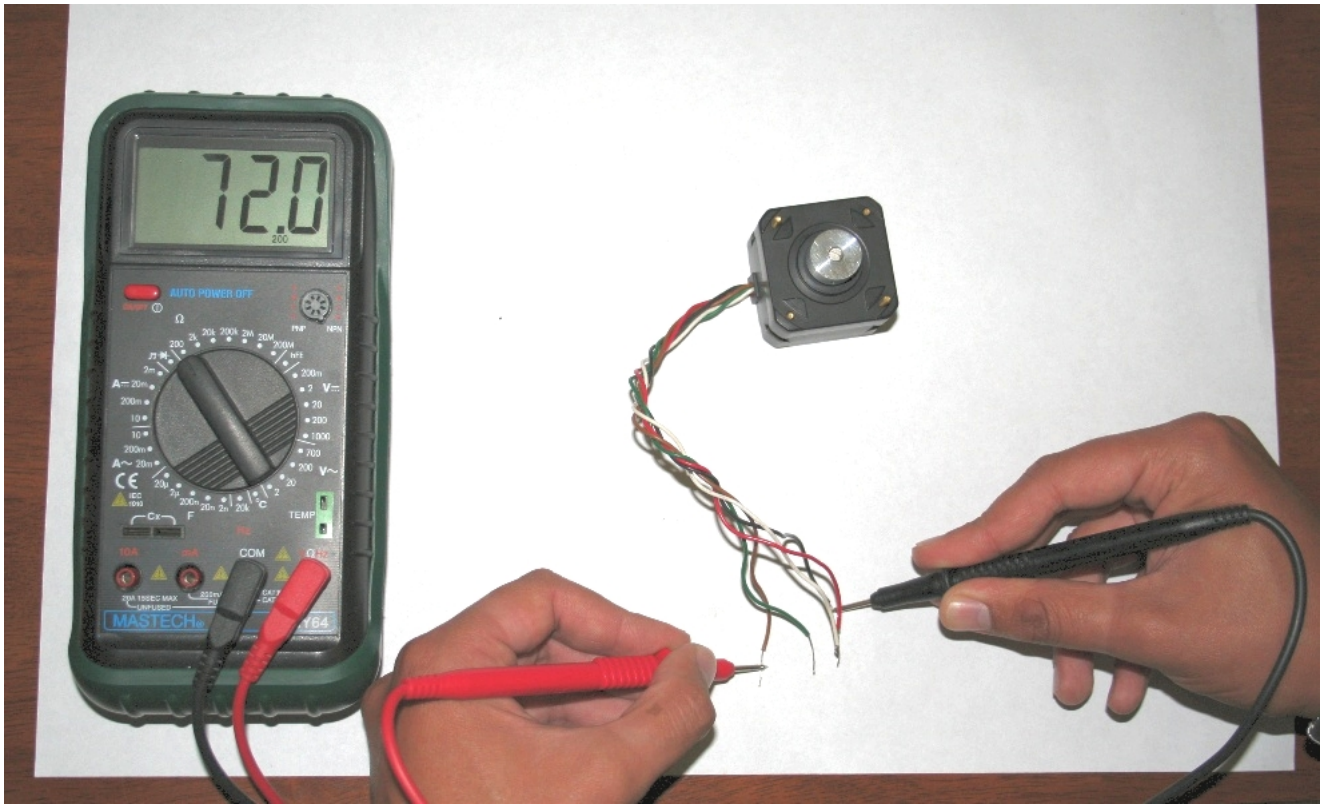
If you have your own motors, you need to identify the two coils.
If you have got the documentation of the motor you are safe!
Otherwise, you can try to identify them by the use of a standard tester set to ohmmeter mode, with a scale of 200 ohms.
Typically, the resistance of the coils ranges from values below one ohm up to several tens of ohms.
In practice, let's try to connect the tester on a pair of wires until you can see a value different from 0; as soon as you have identified one pair, it's easily to find the other one.

No matter how you connect the two pairs, just that these are related in a way similar to signals 1A2A and 1B2B; subsequently, if the direction of rotation of the engine should not be corrected, this can be easily changed by software.

The picture shows how to search for the pairs of wires that identify the coils



Obviously, in relation to the motor used, you must know the current that the coils can withstand and the number of steps/revolution that the motor is able to develop.

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THE INTERACTIVE PHILOSOPHY OF PALOMAR

As we told, PALOMAR is a stand-alone system that does not need a PC to operate or to be configured.
Every function can be run by keyboard and display.
Well, of course, with 25 keys and a display of 20 characters by 4 lines can not be compared to the visibility and convenience of any computer system, but when you must meet the requirements of compactness, reliability and low cost, then the choices are very constrained.
The display system, as already mentioned, is based on a display of 20 characters by 4 lines, but must be viewed as a window that runs on a bigger "blackboard". We called the "blackboard": DISPLAY PANEL or simply PANEL.
The program of the PALOMAR creates and manages many panels, there is one panel for every function.
A panel displays data, operating parameters, help indications and so on.
Even the first window of the PALOMAR is a panel, let's scroll with the UP/DOWN cursors:

you are going to see more information ...

There are two possible states for each panel:

- Executing
- Editing

During the execution, the panel displays the data provided by the program at the moment, and it uses the keyboard in a modality depending from the panel, while in editing modality, functions and use of the keyboard are the same for all the panels.

- How to access the editing of the panel (in the case you can do it)? Just pressing the F4 key
- How to exit the editing of the panel? Pressing the ESC (escape) key, so deleting every possible editing you made or with RET (return) key, so saving the editing.

Tipically, at the bottom of the panel there is a sliding menu reporting the main commands.

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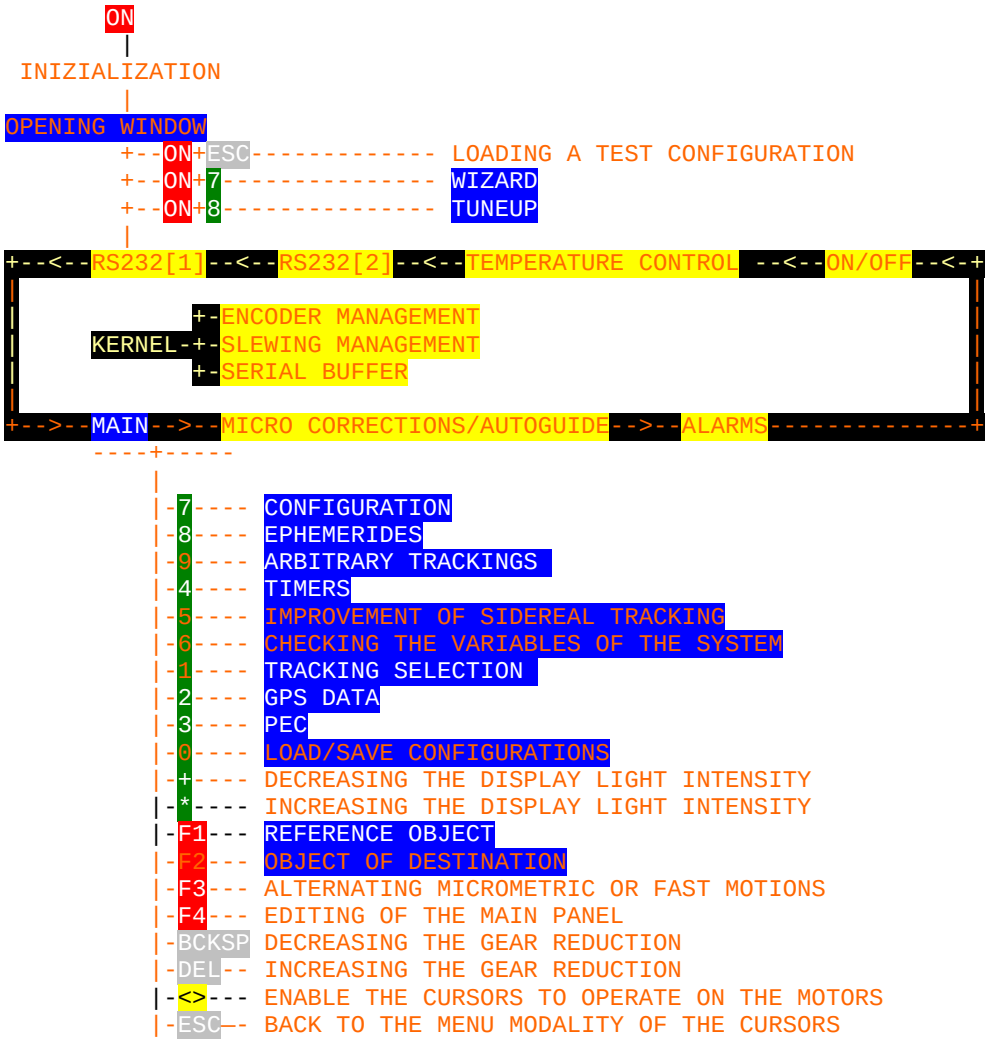
ORGANIZATION OF PANELS AND ACTIVITIES

To get an idea of how work the processes carried out by PALOMAR, look at the scheme below:



As you can see, the power button opens the first panel of the screen, which accepts a key sequence to perform procedures normally hidden.
Once the system is booted, the kernel takes the management of the whole instrument, performing a series of cyclical processes and handling critical hardware drivers by interrupt.
One of the processes managed by the main "loop" is the MAIN panel from which it can be executed all the remaining.
Note: The kernel never stops, the processes are always executed in rapid sequence ensuring real-time execution. Consequently, the PALOMAR will be able to receive, simultaneously, serial commands, perform the procedures relating to a panel, receive commands by the auto guide etc. etc. ... There is only a special case in which the processes are stopped (not including hardware drivers) and this is during the editing of a panel. This is because, often, change the contents of a field in a panel, it also means, for example, change the mode of operation of PALOMAR itself, so the operation required by a process may be incorrect.

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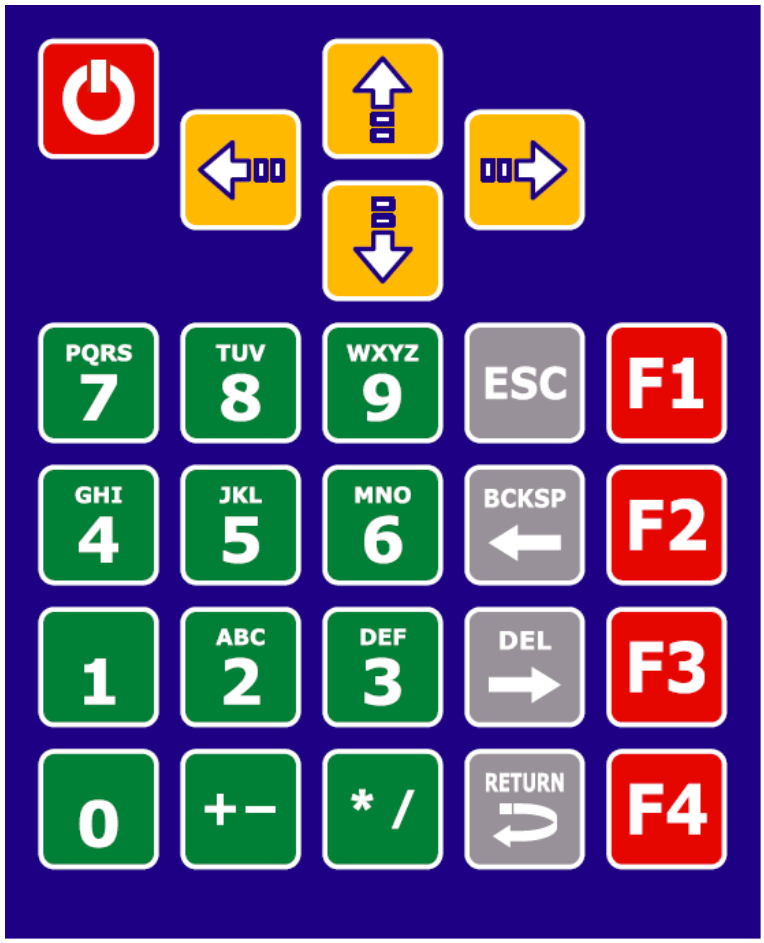
KEYBOARD OF THE PALOMAR



The keyboard of the PALOMAR is organized on 24+1 keys as follows:

- ON/OFF key (red)
- Positioning keys (yellow)
- Control keys (grey)
- Function keys (red)
- Alphanumerical keys (green)

Each panel, when is running, can associate a different meaning to the action of the keys.
But all the panels, when they are running, always have in common the action of the following keys:

For the sliding of the panel

To exit the current panel and return to the main

To edit the fields in the panel

As said, editing mode of a panel is common to all and it is explained in the next chapter.

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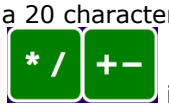
DISPLAY OF THE PALOMAR

Palomar uses a 20 characters by 4 rows backlit LCD display.

With the keys 

it is possible to change the intensity of the back-lit illumination while the contrast is fixed by the factory.
We can supply Palomar with two types of display: LCD and VFD.
LCD is the standard display, cheaper than the other and it can also have an AMBER filter for those who prefer this color. The limit of an LCD display is the temperature as it becomes slower with the temperature decreasing.

Already at -10 degrees centigrade, although it functions, the display can't rapidly run the changes in the content.

As alternative to this problem, it can use VFD display that, other than offer an excellent contrast, also works perfectly up to –40 degrees centigrade, but they have an higher cost.

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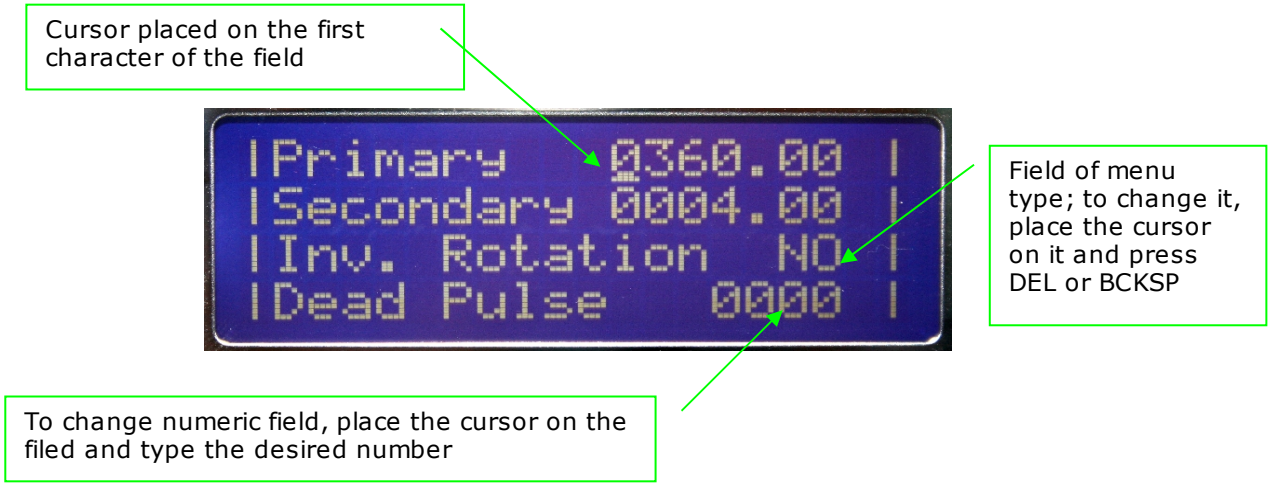
EDITING OF A PANEL

The possibility to edit a field in a panel is a key function for PALOMAR.
The fields that we can find within a panel are:

- Numeric, integer or floating point
- Alphanumeric
- Menu

The numeric fields accept the sign ± only if it is already present, otherwise, only numbers are accepted.
In numeric fields, if the sign is present, you can change it, placing the cursor over it and pressing the + key.
In alphanumeric fields every character is accepted.
The menu, of course, do not accept the entry of any character, but they can be changed according to preset values by pressing the DEL key or BCKSP.
It is a good thing to analyze the image below, showing a part of the configuration panel:



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SUMMARY OF THE COMMANDS ACCEPTED BY EDIT

F4	Many panels of PALOMAR can be edited in various fields that compose them. Pressing F4, you enter the editing modality, the cursor display is positioned on the first editable field.
ESC	Pressing ESCAPE, you exit the editing modality, any changes are lost.
RETURN	Pressing RETURN, changes are saved and it comes back to the displaying mode or to the previous panel
	UP/DOWN keys allow to place the editing cursor on the different editable fields of the panel
	LEFT/RIGHT keys place the editing cursore di editing within the selected field
BCKSP	Delete the character where the cursor is placed and it moves to the left. However, if the field where the cursor is placed is a menu, this button sets it to the previous item.
DEL	Delete the character where the cursor is placed and it moves to the right. However, if the field where the cursor is placed is a menu, this button sets it to the next item.

The fields of a panel may accept numbers or alphanumeric characters depending on the type of variable. The numerical values are easily set by pressing the button of the same name; for alphanumeric, press the function button relative to the position of the desired character.

For example, if you want to type the letter P, press, in order, the keys:

taking care to first press F1 and, holding it down, then press the button 7.
To type the character Q, you must hold down the F2 key and, simultaneously, the key 7 and so on.

Here, then, the various combinations for the key 7:

PRESS THIS KEY FIRST	PRESS THIS KEY FOR SECOND	CHARACTER SET
F1	PQRS 7	P
F2		Q
F3		R
F4		S

AUTOREPEAT

Extending the push of a button, you cause the repetition of the same, with a frequency more and more fast. Auto-repeat function starts after half second of pressure.

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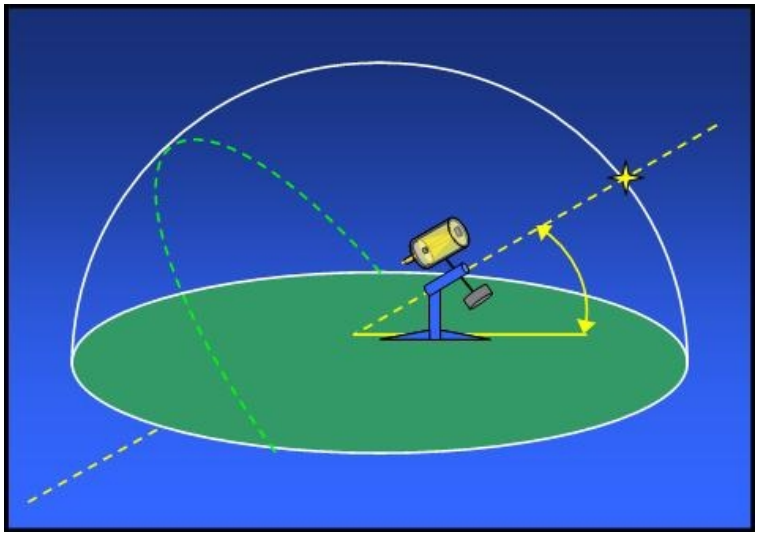
FIRST INSTALLATION OF THE PALOMAR

Once you connected the motors to the PALOMAR and the device is fed, we can carry out the first configuration.
There are two basic ways for configuration: through the Wizard and the Tune Up panel or by the configuration panel.
An experienced user will work directly with the configuration panel, but if it is the first time you configure a PALOMAR, we suggest you first run the WIZARD and, later, the TUNEUP. Afterwords, you can also access the configuration panel to check the parameters and possibly change them.

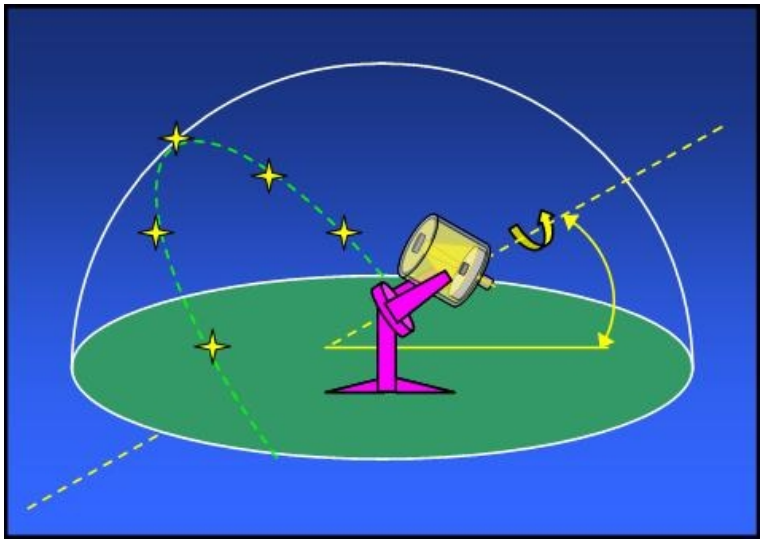
A little premise: we'll often remind to the position of HOME, this is a special position of the telescope, which is crucial for German mounts and only useful for the configuration in case of fork mounts.

Here alongside we report the position that the telescope with German mount must have when we say it is in HOME position.



In this position the counterweight is perfectly vertical and it is at the minimum height above the ground while the axis of declination is at 90°.

The fork mount is less critical with regard to its orientation, however, in the home position, we suggest that the right ascension is aligned with the meridian and the declination points to the celestial equator.



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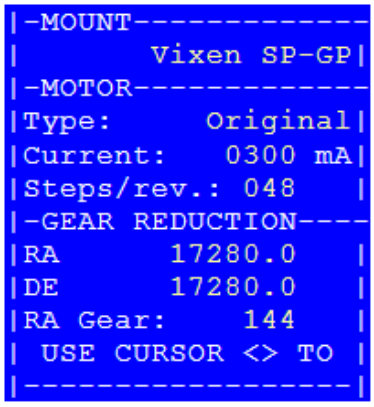
First step: let run the WIZARD for the setting of the mount.
Start ON the PALOMAR, pressing the key ON +key 7. As soon as the opening window of the PALOMAR appears, release the key ON, still holding the key 7 pressed.
After a while, it appears the WIZARD panel and we can release the key 7.
The WIZARD collects the information necessary to PALOMAR relation to a series of mounts, commercial or not.

Here below the panel appearing:



It is shown the whole panel, but since the LCD display can show just 4 lines, to visualize the remaining parts, you have to use the keys

Instead, If you wish to change the type of mount, press the keys until it it appears the name of your mount.
Must, of course, verify that the parameters displayed match those in your possession.
If the mount in your possession is not listed, you should select the generic **GERMAN** or **FORK** mount (to decide which type) and then edit the data by entering the correct ones.
Once the mount is selected, press the RET key and the first configuration step is executed.

The WIZARD procedure sets only certain parameters necessary for proper operation; now we need to define the directions, optimize the slewing speed and set any backlash that transmissions could have.
For this purpose, an experienced user can use the configuration panel, but it is much easier to use the TUNEUP program present in PALOMAR.

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LIST OF MOUNTS RECOGNIZED BY WIZARD

MOUNT	MOTOR	Ampere	STEP/REV	RA	DE	RA MAIN
"10MicronGM2000 AM"	"Sanyo-Denky"	1.2	200	860	860	215
"AD-5 I"	"Berger"	0.7	48	18750.0	18750.0	250
"AD-5 II"	"ESCAP P520"	1.8	100	15625.0	16666.7	250
"AD-6 I"	"Berger"	0.7	48	20625.0	18750.0	220
"AD-6 II"	"ESCAP P520"	1.8	100	13750.0	16666.7	220
"AD-7 I"	"Berger"	0.7	48	20250.0	19687.5	270
"AD-7 II"	"ESCAP P520"	1.8	100	16875.0	17500.0	270
"AOK WAM 80/800"	"SAIA UFB3"	1.2	24	37693	37693	107
"AstroPhys. CNC400"	"Original"	0.3	48	28800	28800	192
"Bellincioni Alpha"	"Sanyo-Denky"	1.2	200	1440	1200	360
"Bellincioni Beta"	"Sanyo-Denky"	2.2	200	1200	1000	300
"Bellincioni Gamma"	"Sanyo-Denky"	2.2	200	1480	1200	370
"Bellincioni Omega"	"Sanyo-Denky"	1.5	200	1200	1000	300
"Celestron G11"	"Hurst SP-3192"	0.18	24	54000	54000	360
"Celestron G11 M."	"ESCAP 530"	1.8	100	4320	4320	360
"Degli Innocenti"	"Sanyo-Denky"	2.0	200	1077	1077	359
"Gemini G41/42"	"Original"	1.0	200	432	432	144
"German"	"Sanyo-Denky"	2.0	200	1440	1440	360
"Fork"	"Sanyo-Denky"	2.0	200	1440	1440	360
"Ianus"	"Sanyo-Denky"	1.5	200	576	480	144
"Losmandy G8"	"Hurst ABS 3008-002"	0.18	24	27000	27000	180
"Losmandy G8"	"Hurst ABS 3008-004"	0.18	24	5400	5400	180
"Losmandy G11"	"Hurst SP-3192"	0.18	24	54000	54000	360
"Losmandy G11 AM"	"Sanyo-Denky"	1.8	200	1440	1440	360
"Losmandy G11 M."	"ESCAP P530"	2.0	100	4320	4320	360
"MAM-20-P"	"N 4H4018M"	1.4	200	2160	2160	120
"MAM-20-P II"	"N 4H4018M"	1.4	200	9720	9720	120
"MAM-50-P"	"N 4H4018L"	1.7	200	2400	2400	120
"MAM-50-P II"	"N 4H4018L"	1.7	200	10800	10800	120
"MAM-100-P"	"N 4H5618X"	1.8	200	3600	3600	180
"MAM-100-P II"	"N 4H5618X"	1.8	200	10800	10800	180
"MAM-150-P"	"N 5618X"	2.0	200	3600	3600	225
"MAM-150-P II"	"N 5618X"	2.0	200	10800	10800	225
"Marcon MB50"	"Sanyo-Denky"	2.0	200	1800	1800	180
"Marcon fork"	"Sanyo-Denky"	2.2	200	1008	1008	144
"Takahashi NJP"	"ESCAP P530"	2.0	100	6720	6720	180
"Vixen ATLUX"	"Original"	0.4	200	9600	7200	240
"Vixen ATLUX M."	"ESCAP PH632"	1.1	200	9600	7200	240
"Vixen SP-GP"	"Original"	0.3	48	17280	17280	144
"Vixen SP-GP M."	"ESCAP P530"	2.0	100	1728	1728	144
"Vixen SP-GP AM"	"Sanyo-Denky"	1.5	200	576	576	144
"Vixen Sphinx"	"SECM3"	1.34	200	2080	2080	180

If your mount is not included in the present list and you would like to include it, just notice us name and parameters and it will be added in the next revision of the program.

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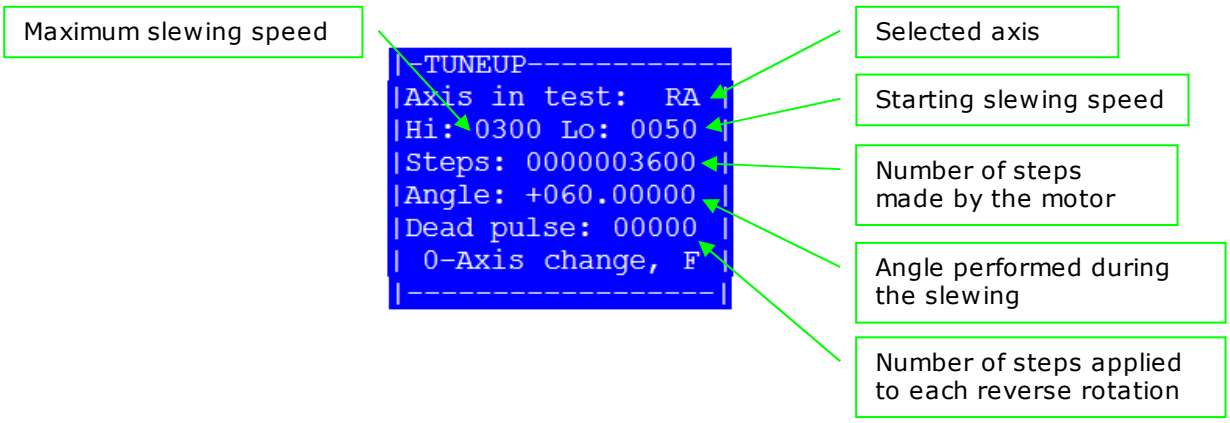
TUNEUP

Tuneup is accessed after the WIZARD is completed, but, if you want to re-run the TUNEUP later, just turn on PALOMAR pressing 8 key, besides the ON button.

As before, once the first window of the PALOMAR appears, release the ON key, then, when the opening window appears, release the 8 key and it appears the TUNEUP panel (the values shown in the window are relative, since they change according to different mounts).



Note: The slewing speed is expressed as NX, that is N times the selected tracking frequency.

Now it is possible to carry out the following setups:

Checking the direction of rotation of the telescope axes
Optimization of the slewing speed
Checking backlashes of the transmission system

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COMMANDS RECOGNIZED BY TUNEUP

F1	Reverse the direction of rotation of the selected axis. When the command is recognized, the Palomar run a flash of the LCD back-light
F2	Increase the maximum slewing speed of the selected axis
F3	Decrease the maximum slewing speed of the selected axis
F4	Edit the panel fields
0	Change the selected axis
1	Set the angle to execute at 1 second of arc
ABC 2	Set the angle to execute at 30 seconds of arc
DEF 3	Set the angle to execute at 1 minute of arc
GHI 4	Set the angle to execute at 1 degree
JKL 5	Set the angle to execute at 2 degrees
MNO 6	Set the angle to execute at 5 degrees
PQRS 7	Set the angle to execute at 10 degrees
TUV 8	Set the angle to execute at 45 degrees
WXYZ 9	Set the angle to execute at 90 degrees
+−	Increase the value of backlashes
* /	Decrease the value of backlashes
	Execute the slewing of the programmed angle in counter-clockwise and on the selected axis
	Execute the slewing of the programmed angle in clockwise and on the selected axis
BCKSP	Decrease the starting slewing speed of the selected axis
DEL	Increase the starting slewing speed of the selected axis
RETURN	Clear the contents of the “Steps” key
ESC	Exit the TUNEUP and save the data

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CHECKING THE DIRECTION OF ROTATION

This test allows you to check whether the direction of rotation of the telescope is set correctly.
Note that the direction of rotation changes because of links between the phases of the motors or due to cascade of gears, if any.

- Manually move the telescope in position HOME
- Set an angle of rotation for the test that you consider appropriate; if, for example, you choose 10 degrees, press key 7 (see table above).
- Select the axis on which you want to run the test, if one shown on the panel is not what you want, just press the 0 key until you reach the goal.
- Press the key and verified that the telescope moves in counter-clockwise direction. If the movement is not those expected, press the F1 key and repeat the test.
- Repeat the test for the other axis.

At this point, the checking of the direction of rotation is finished and you can go to the next.

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OPTIMIZATION OF THE SLEWING SPEED

In WIZARD the slewing speed is pre-set at a low value of 300x with a starting speed of 50X.
These two values also determine how the acceleration and deceleration ramp of the motors are going to develop.
The ramp is developed (in non-linear way) on 16 steps, from minimum to maximum speed and vice versa.
The choice of the ramp is essential to achieve high slewing speed and at the same time having a high accuracy of the pointing accuracy.
Even knowing the type of motor and all the system parameters, it is very difficult to predict in advance the optimal values of the ramp and slewing speed, so this experimental test is very useful.

1. Manually move the telescope in position HOME.
2. Set up a rotation angle of the telescope sufficiently large but consistent with the degrees of freedom of the instrument. The need of a big angle is required because the slewing is developed by making a ramp of acceleration and deceleration and, depending on the values set, we need a good angle to reach the maximum speed. Assuming that your telescope does not have problems of slewing, press 9 key to set 90 degrees.
3. Press now or to run the slewing and observe what happens:
    - The slewing time of the telescope appears to meet your needs so you pass the next test.
    - The slewing time of the telescope appears too slow and you want to increase the speed:
        - Press the F2 key until the “Hi” value reaches up to 100 units. Now, start again from point 3 maybe making a slewing in the opposite.
    - The telescope made a part of the slewing and then crashed:
        - The final speed is to high: press the F3 key until the “Hi” value decreases up to 10 units. Now start again with step 3 maybe making a move in the opposite.
        - Check if the telescope is well balanced or if the worm has a friction at that point more pronounced.
        - Check that the power supply used not collapse during operation.
    - The telescope was immediately blocked early slewing:
        - The initial speed is too high: press BCKSP key until the "Lo" value decreases by 10 units. Now start again with step 3 maybe making a move in the opposite.
    - The slewing was successfully completed but the duration of the acceleration and deceleration ramp is much too short:
        - The initial speed is too high: press the BCKSP key until the "I" value decreases by 10 units. Now start again with step 3 maybe making a move in the opposite.
    - The slewing was successfully completed but the duration of the acceleration and deceleration ramp is much too long.
        - The initial speed is too low: press the DEL key until the “Lo” value increases by 10 units. Now start again with step 3 maybe making a move in the opposite.

Find the maximum slewing speed consistent with highest reliability means repeat this test many times and we must also consider that the supply voltage has some very major impact on the performance of the motors.

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CHECKING BACKLASHES OF TRANSMISSION SYSTEM

For this test you must use a telescope with good magnification, using an eyepiece with a sight, the greater the magnification, the more our measure will be accurate.

1. Place the telescope manually to point a distant land object, like an antenna, a tower or similar.

2. Press F4 and edit the panel setting the value 10 in the field “Steps”
3. Carry out the final slewing with the positioning keys
4. If you carried out the final slewing with the key now let use the key (or vice versa) and count how many times you have to press the key so that the telescope start to move.
   a) The telescope is misaligned to the first position: the test was finished, the transmission system has no backlashes.
   b) I had to press 10 times the positioning key for the telescope was moving a little and misaligned: press the + key to bring the value of the "Dead pulse"field at (N-1) * 10, in this case to 90 . Now repeat from step 4.

At the end of this test our system is ready to work.
Press the ESC key and you are in the main panel.
All data are stored in nonvolatile memory system (EEPROM).

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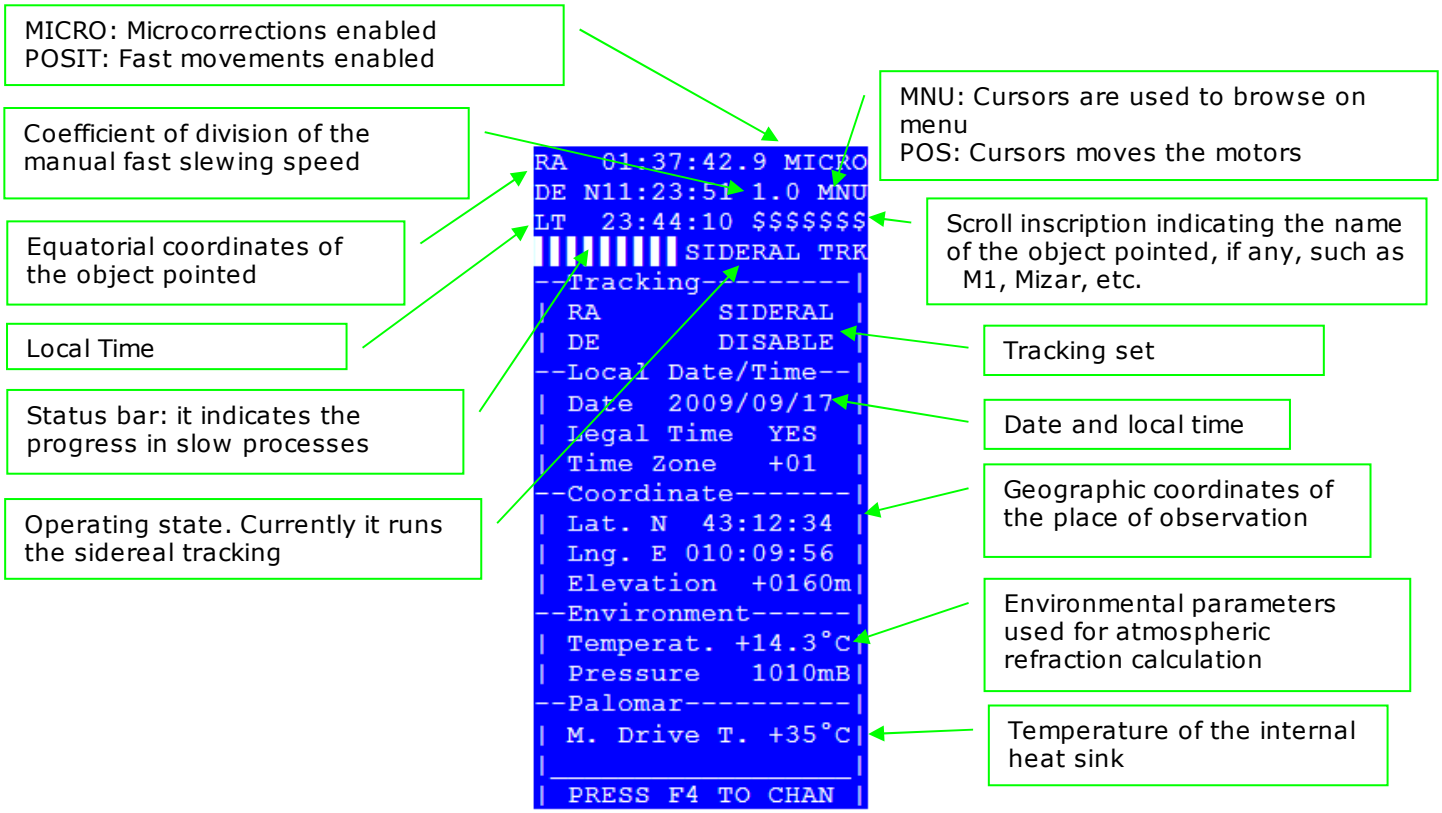
MAIN PANEL

This is the fundamental panel, from which start all the main applications and where there are shown the most important information on state and setting of the instrument.



Once the device has been turned ON, verify that date and time are correct.
If you have the GPS options, we suggest to you use it for update these parameters, since it is surely more precise than the internal clock of the computer.

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COMMANDS RECOGNIZED BY THE MAIN PANEL

F1	Set the object of reference
F2	Point the telescope to an object
F3	Alternate micro-correction modality and manual slewing. When the command is recognized, the PALOMAR run a flash of the LCD back-light.
F4	Edit the fields of a panel
0	Save/Load a setting of PALOMAR
1	Allow to select a tracking between the ones preset
ABC 2	Display and take data from GPS
DEF 3	Menu of the PEC
GHI 4	Panel of the timers
JKL 5	Panel of the improvement of tracking
MNO 6	Displays some system variables (panel used just for diagnosis)
PQRS 7	Configuration panel
TUV 8	Displays ephemerides for the date and hour set
WXYZ 9	Panel for arbitrary trackings on both axes
+−	Decreases the back-light intensity
* /	Increases the back-light intensity
	Pressing contemporaneously the two keys, it alternates SCROLL mode with the slewing of the motors. Normally, the cursor keys are used to navigate in the panels; however, it is possible to use the cursors even for the slewing of the motors in absence of the joystick. If the cursors are in SCROLL mode, on the status line there will display MNU, otherwise, POS. When the command is recognized, the Palomar run a flash of the LCD back-light.
	Increase / decrease the slewing speed by joystick or cursors. Manual slewings undertaken with the cursors or joystick use the settings of automatic slewing and sometimes it is useful to decrease this value. The action of two keys changes the value of a coefficient of division of the slewing speed.

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REFERENCE OBJECT

POINTING OBJECT

These two commands are perhaps the two basic functions of a pointing system. They both have the same menu selection and the same type of opportunities, obviously with very different meanings and actions.
The symmetry of the two controls also allows us to perform the calibration of the instrument, even using non-stellar objects, planets and other, but we suggest you to use the stars.

For maximum precision pointing, we have taken into account many parameters, including: the proper motion of stars, the precession, nutation, aberration and atmospheric refraction. Obviously, it is essential that the geographical and environmental parameters are correct.

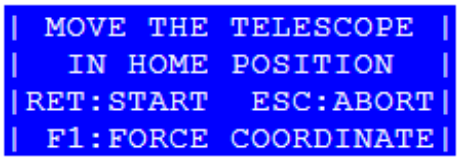
By F1 we calibrate the instrument on a reference object, while by F2 we're going to point the desired object. Depending on the type of instrument, the calibration method is very different.

GERMAN MOUNT

When you calibrate a German mount, you've always to start from the position of **HOME**.
Choose the star or object of reference, confirm and wait until the telescope reaches the slewing; if necessary, make any micro / macro correction to adjust the balance, then, press F1 again to inform the PALOMAR that the reference object is perfectly aligned.
For a good calibration of the instrument it's better to point to more than one stars and from time to time, make necessary corrections, remembering that the **macro corrections** measure the misalignment while micro corrections not. In practice, we can leave the calibration procedure open as we want and improve the centering on more stars (with macro corrections). From the measurements of these misalignment s, the system extracts a polar misalignment (Eq. Wallace) to refine the subsequent slewings. If you believe the macro corrections act too quickly, just remember that 'can reduce the value with the following keys of the main panel.

FORK MOUNT

For fork mounts, the calibration procedure is easier.
Point your telescope on a reference star, press **F1** and search the star in the list, then confirm the selection and the telescope is calibrated.
This is true if your system is perfectly aligned to the pole! You do not trust the fact that your telescope has a good tracking and chasing a star for 10 minutes, because to make a slewing of 90 ° is equivalent to perfect tracking a star for 6 hours! Again you need to calibrate the system on more sars and make the necessary corrections with the command MISALIGNMENTS.
Since you select the type of mount in configuration phase of the PALOMAR, this will act accordingly; in fact, after selecting the object, in the case of German mount and for calibration procedure, you will get the following message:



By the F1 key it is also possible to resynchronize the telescope position without making the slewing passing from home position.

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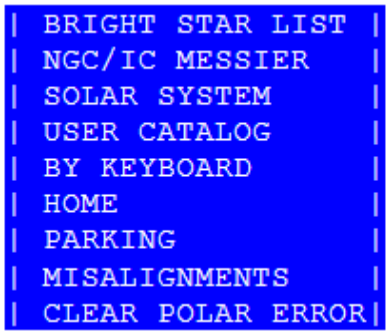
The proposed menu for selecting the type in calibration or slewing is as follows:



BRIGHT STAR LIST	You can choose one of the 50 brightest stars in the sky (refer to Appendix A for complete list).
NGC/IC MESSIER	Complete NGC 2000 catalog, including NGC and IC objects for a total of 13226
SOLAR SYSTEM	Planets, Sun and Moon
USER CATALOG	Catalog of celestial objects compiled by the user
BY KEYBOARD	Direct set of equatorial coordinates
HOME	It indicates to PALOMAR the position of HOME
PARKING	It indicates to PALOMAR that the current position is the resting position for the telescope
MISALIGNMENTS	Command that, by MICRO CORRECTIONS, allows us to indicate to PALOMAR the misalignment of the pointed object from which to derive the polar misalignment.
CLEAR POLAR ERROR	You can choose one of the 50 brightest stars in the sky (refer to Appendix A for complete list).

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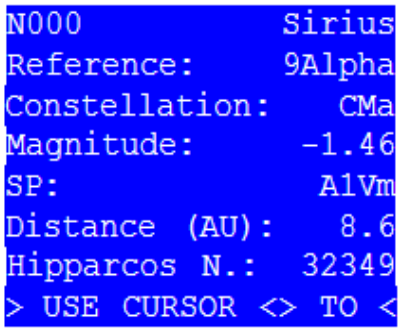
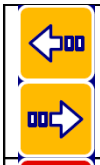
BRIGHT STAR LIST

You can access a list of stars you can use as reference for calibration or target of the telescope.
You can't edit this panel, just change the star only by the cursor keys.
This is the panel it appears:



Use of the keyboard:

	The cursor changes the star type. If you want to quickly scroll the list, hold down the key and wait auto-repeat.
	Scrolls forward "reference". Ex Alpha-> Beta-> Gamma. Once you find a star, this is highlighted. In practice, all the stars belonging to the constellation selected are shown.
	F2 increases, F3 decreases the index identifying the constellation. Once you find a star in the selected constellation, this is highlighted.
	Confirm the selected object.
	Cancel the operation and come back to the main panel.

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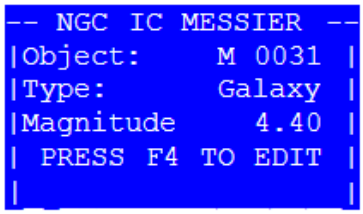
NGC/IC MESSIER

You can access a list of non-stellar objects, organized accordingly to NGC, IC or MESSIER catalogs.
This is the panel it appears:

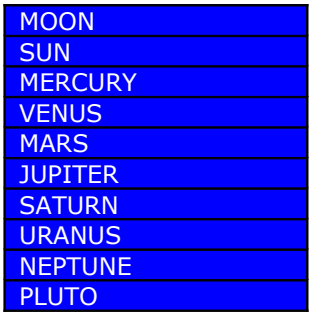


You can edit the panel and it is possible to directly indicate the catalog and the number of the reference object.
The commands recognized by this panel are:

	Cursors change the object. If you want to quickly scroll the list, hold down the key and wait auto-repeat.
	Select the NGC catalog.
	Select the IC catalog.
	Select the MESSIER catalog
	Confirm the selected object.
	Cancel the operation and come back to the main panel.

SOLAR SYSTEM

You can access a menu allowing to select one of the following objects of solar system:



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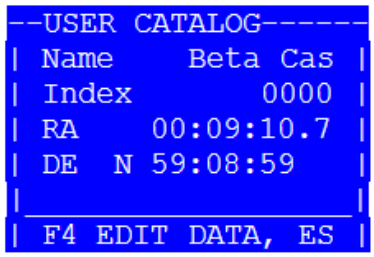
USER CATALOG

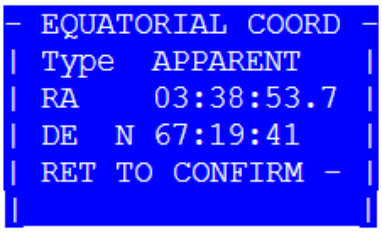
This command gives the possibility to access a personal catalog of objects. The personal catalog can accept up to about 6000 objects and it can be set by a remote program or by CONSOLE modality. The panel below permits to select one of the objects in the catalog:



The commands accepted are the following:

	The cursors change the object. If you want to scroll fast the list, press the key and wait until the auto-repeat starts
	Confirms the selected object
	Cancel the operation and return to the main panel

BY KEYBOARD



By this commands you can directly indicate the coordinates you are going to use. It's very important to note that you must indicate if these are **apparent** coordinates, then correct for any astronomical and localized variations or if these coordinates are referred to the equinox J2000.
This is the panel will be shown, you must always edit it with F4 key.

HOME

This command is useful in slewing, in order to make telescope able to reach the position necessary for a subsequent calibration of the German mounts. Instead, it makes little sense to use it during calibration.

PARKING

This command, when used as a reference (**F1**), indicates to PALOMAR the position to be used to park our instrument at the end of the work and to have the instrument already calibrated at the next turn ON.
If, instead, it is used with the positioning (**F2**), it says the telescope to position itself in a position set before (**F1**), suitable for the instrument at rest.
Note that if the instrument during its inaction will not be moved, will be switched pre-calibrated. For this command is essential the accuracy of the internal clock, which means that if you "wake up" the instrument after several weeks of inactivity, this will always be well-calibrated, while inactivation of months might show a level of inaccuracy.
The imprecision of the restoration of the position is not only due to the error of the internal clock, also to any changes in temperature the electronics should suffer, because, even with a modest contribution, the quartz used as a time base undergoes variations on the frequency of oscillation, due to the ambient temperature.

Some additional considerations must be made on the slewing when using equatorial mounts. Actually, when the telescope performs a slewing, always it takes the shortest path to reach the new coordinates, unless some constraints are violated. The first constraint is not going to bit a column, but you can also add another: that, if possible, to keep the counterweight always down to have a easier observation position. This last option is activated by the configuration panel under the menu item "**Smart Mode**".

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MICRO/MACRO CORRECTIONS

The slewing corrections that can be performed by keyboard, joystick or autoguiding are fully programmable as set values and as a direction.
The speed used by the motors for the correction of the slewing is selectable in two basic modes:

- **MICRO CORRECTIONS**. They make small slewing of the telescope and are mainly used for making corrections on the tracking of the telescope. The slewing speed can be programmed in the configuration panel (points 16-17 for RA and 33-34 for DE). They do not involve the change of coordinates.
- **MACRO CORRECTIONS**. Are used to perform rapid slewings of the telescope; they vary the coordinate of the telescope and they basically use the speed of automatic slewing panel (points 9-10 for RA and 27-28 for DE in the configuration menu), but may be locally decreased by using the

keys that operate on a variable of division.

Pressing F3, you can switch one of two possibilities. When the command is recognized, the display is running a flash of the LCD back-light and the state is changed in the main panel.

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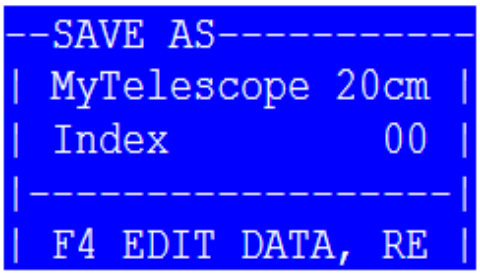
0 LOAD/SAVE THE CONFIGURATIONS

This command allows you to save the current configuration of PALOMAR or load a previously saved one. This possibility, as well as allowing a backup of the settings, it is useful to employ the PALAMOR on different motorized mounts. For example, we can have a mount in our fixed location and one used for our missions in different sites.
It can have up to four different configurations.
The first menu that appears asks if we want to load a configuration saved by the menu "LOAD" or if we want to save one with the menu "SAVE AS".

This command also gives you the possibility to create a backup of the configuration in use.

LOAD. Selecting this command, it appears a menu listing all the configurations available. Scrolling the list, it is possibile to select one and load it just pressing the RET key.
Before it is actually loaded it should be verified with the configuration command, open the editing and then saved. All this is necessary for the safety of the Palomar and what it is connected with.
For example you might have a mount that uses motors of 500 mA and another employing motors of 2000mA with two different configurations saved. It is obviously that if you erroneously load the latter configuration with the first mount it can easily be damaged!

SAVE AS. It allows to save the current configuration by associating a alphanumeric string. It appears the following panel, that you can edi by pressing the F4 panel:



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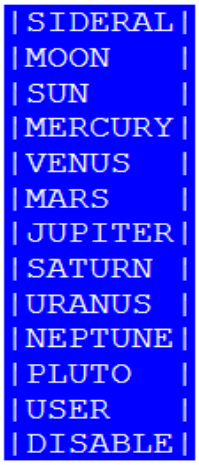
1 TRACKING SELECTION

PALOMAR is able to execute arbitrary tracking on both axes.
The most used is the sidereal tracking, that allows to track the most of the celestial bodies in their apparent motion.
Some of these, however, have proper motions which are combined with the land one, so their high-magnification observation may imply to see them leave the field of view more or less rapidly. This command calculates the speed of tracking for a selected body or it can perform a tracking, starting from arbitrary values. It should be emphasized that, by enabling these motions, you can quickly lose the reference coordinate of the equatorial system, so, for the maximum precision of the instrument, you should always make a calibration after it used a tracking different from the sidereal one.

The menu that appears is the following:



Depending on the choice made, even the motor on declination may set in motion and, consequently, the status of the main panel is updated.

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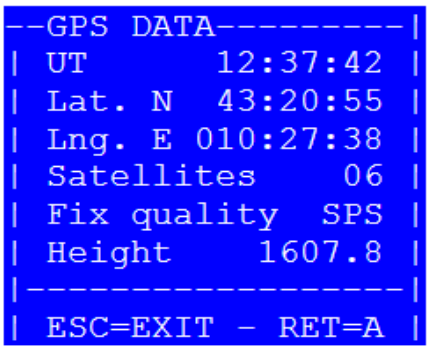
GPS

The PALOMAR contemplate (as an option) to use an internal GPS module and an external magnetic antenna. This option allows to have, in each site of observation, precise geographic coordinates and a very precise time synchronization.

The panel that appears is the following:



If the GPS antenna has the visibility of satellites, the site coordinates appear with relative height above sea level, in addition to Universal Time. Pressing RET, the data collected by the GPS will be saved and used.

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DEF 3 PEC

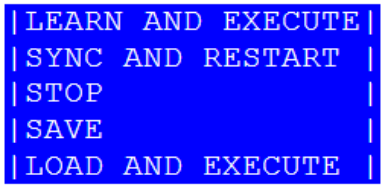
In most commercial (and not) telescopes, the slewing of the axes is realized via the crown gear and worm. The quality of mechanical working can greatly affect the quality of images. One of the most common defects is the **periodic error**, basically a non-constant grip of the worm on the crown gear. Eliminate this defect from mechanics is impossible, unless you replace it with a qualitatively superior one. Consequently, so that the image is still, should guide the telescope with continuous micro-corrections.
PEC (Periodic Error Correction) allows you to acquire the corrections you made and, subsequently, re-run them infinitely, allowing you to make long exposures.

In PALOMAR there are two possible modes of PEC:

1. Learn / Run. This is the most simple mode: PALOMAR keeps all your corrections for the duration of a complete rotation of the worm, then, re-run them infinitely.

2. Synchronize / learn / Run. This mode is similar to the previous, but provides a physical point of synchronization of the worm through an input of PALOMAR.
   The advantage is that, being synchronized, can be re-executed as many times as you want, avoiding the step "Learn".
   To enable the synchronized version, please enable the homonym item in the configuration panel (see points 48,49,50 of the configuration panel).

The menu appearing is the following:



- **LEARN AND EXECUTE**: If you are equipped with a synchronization, the system expects that this is realized and then it starts with the learning phase (LEARN). Once the synchronization event re-happens, the learning phase ends and begins the execution phase (PEC EXEC). If you do not have a hardware synchronization system that is achieved only on the calculation of the time period of revolution of the worm, then it follows that at any shutdown or movement of the telescope should also repeat the learning phase.
- **SYNC AND RESTART**: Command reserved for those who have a timing system on the worm, in practice this command allows you to apply previously acquired PEC.
- **STOP**: Abort a phase of learning or performance of PEC.
- **SAVE**: Save a previously acquired PEC in EEPROM il PEC.
- **LOAD AND EXECUTE**: Load a previously acquired PEC from EEPROM and execute it.

The possibility of having a synchronization of the worm gives us a chance to run once the learning phase and then to applied it again any time we want. Of course, all the teeth of your gear must be fairly equals or the PEC will change from area to area of the gear itself.

The PEC is made by keeping accurate records of the corrections made by Joystick (recommended) in right ascension. The system has 8192 points available for registration, this means that using for example a gear with 360 teeth, each point is acquired every 30 milliseconds. This value comes from the fact that a worm keyed to a gear of 360 teeth takes about 240 seconds to make a revolution, so we have: 240 / 8192 = 0.029296875 s.

Another very important point is the type of sensor used for synchronization of the worm, we strongly recommend you to use a PNP or NPN inductive proximity sensor. These sensors allow the detection of a small metal (iron) part placed at very close range with excellent reproducibility and without physical contact.

Here below a picture of a M4 PNP proximity sensor:

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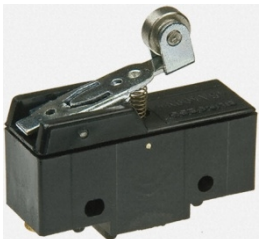
In the picture below, you can see another kind of proximity sensor mounted on the worm:

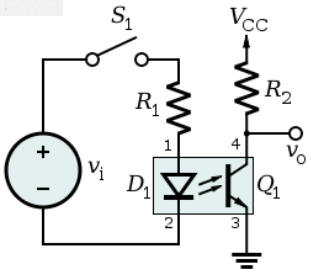
It is fundamental that the proximity sensor achieves a detection more punctiform as possible.

For the synchronization, you can also use standard toggle; there are many different types on the market, the choice must be made especially for a good mechanical precision and a small mechanical size.

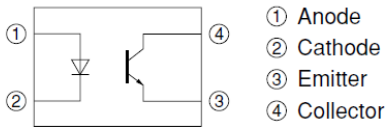
Just as example, you can see a kind of these switches in the image below.



They are almost all switch, we need to use the COMMON and the contact NORMALLY OPEN.
As input of the PEC you can use one of the TTL inputs from PI[0] to PI[3].
We strongly recommend you to not connect directly the output of your position sensor to the input port, it is much more convenient to use an optical decoupling system following the scheme below:

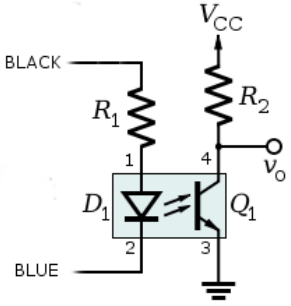


Connect VCC to PIN 2 of Y2
Connect the GROUND to PIN 25 of Y2
R2 is a 2200 ohm resistor
R1 is a 2200 ohm resistor for a Vi voltage ranging from 12 to 30 volt.
Set LOW at point 50 of the configuration
As optical decoupling system it can use a PC817X4J000F by SHARP but sincerely you can use any of these systems that are largely present on the market.
Look at the shape and connection of one of these optical decoupling systems here below (they are all the same):



This is the connection scheme for a PNP inductive switch type, remember that the proximity sensors have three output wires:

BROWN: positive powering 12 to 30 volt
BLACK: output
BLUE: ground



Connect VCC to PIN 2 of Y2
Connect the ground to PIN 25 of Y2
R2 is a 2200 ohm resistor

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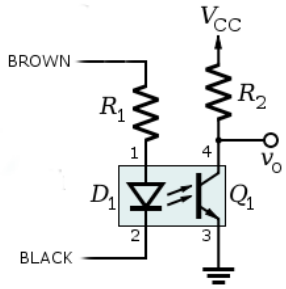
R1 is a 2200 ohm resistor for a supply voltage of the proximity sensor ranging from 12 to 30 volts (BROWN = +12, BLUR = GND).
Set LOW at point 50 of the configuration.

Here below the scheme for a NPN inductive sensor:

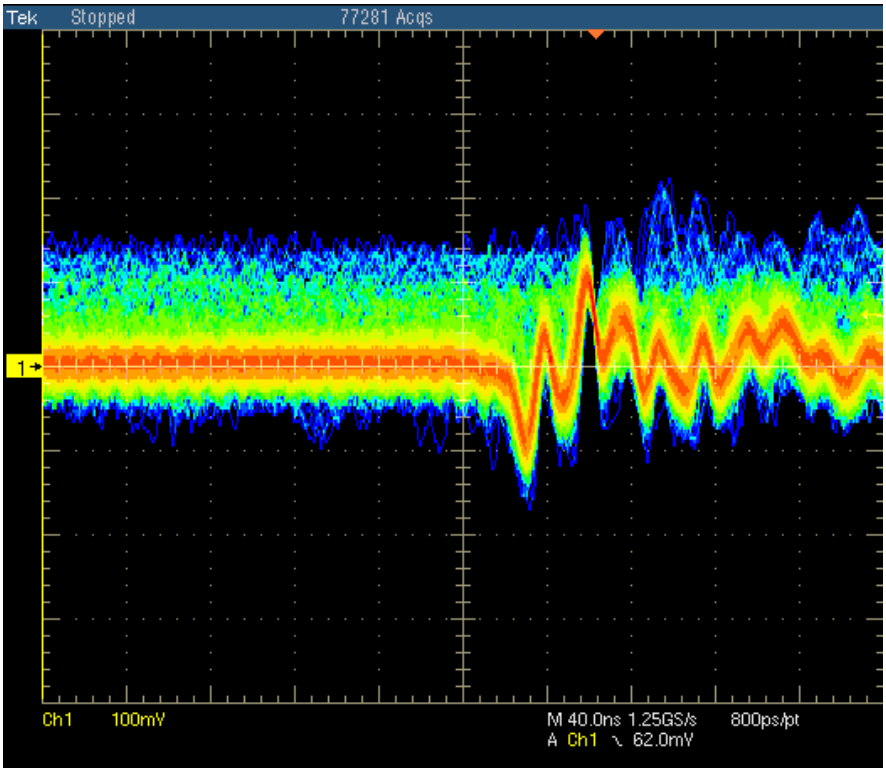
Connections and values are the same as the previous documentation.



To end, just a notation: why don't connect the output of the positioning sensor directly to the provided one?
The answer is easy: to reduce the possibility of malfunctioning due to interference or ground rings.
The concept is very simple: the PALOMAR has a own power supply and it can be connected to a PC by a serial port.
It can also be connected to an auto-guide controlled by the same PC.
Finally, there are different connections to devices such as limit switch, encoder and so on.
All the wires used in these connections are often very long and they becomes a good antennas "fishing" in a very polluted sea as our electromagnetic spectrum.

To reduce possible trouble is better to have a small 12V 1A power supply to power various small devices and use the optical decoupling to connect to Palomar.

To make the idea here below you find an image taken by a digital oscilloscope with the probe short-circuited by 5 cm of copper wire. What you see is FM 88-108 MHz!



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The ground loops are dangerous for the signal connections. In fact:

- let suppose that at least one of electrical devices is powered by the mains power (for example, the PC) and that there is a not negligible or parasite or inserted ad hoc capacity (for example to filter the radio noise) between the conductors at mains potential and the earth.
In this case, it is very probable that a 50 Hz current added to different noises always present in the mains power passes through the conductor that connect the device where the dispersion is generated and the earth.
At that point, due to the resistance and the electrical impedance of the conductor, across the conductor it generates a noise voltage present at the ends of the shielding braided wire of the signal cables. This voltage is added to the present signal and it can cause malfunctioning.

- if there is time-varying magnetic field in the inner of the ground loop, it generates an induced current in the loop itself involving the same effect of a noise voltage that goes to add at the signal saw in the previous point.
The variable magnetic field can be produced by THE dispersion of power transformers, the dispersion of switching, by radio frequency signals (I, for example, live within the range of a MF radio transmitter), or other.

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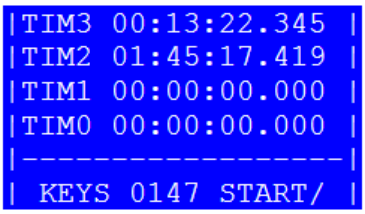
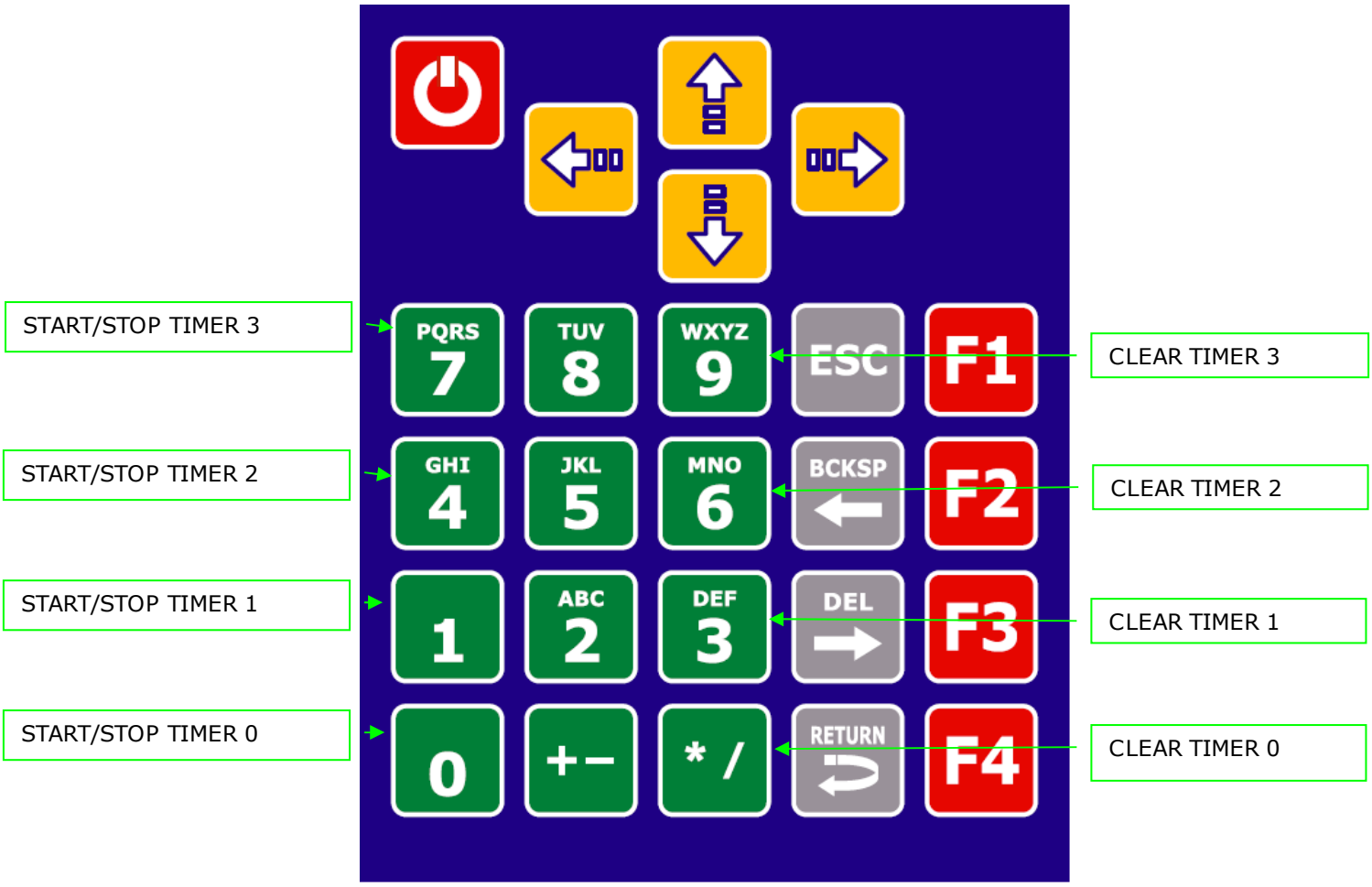
GHI 4 TIMERS

In this panel we can find 4 timers, that you can use for many different kind of measures.
Other than visualize the contents of the timers, the panel allows to execute start/stop and clear functions.
Timers' functions stay active even when you exit the panel and execute any other function of your interest.
To see their count values, just open again the panel.
Here below the panel appearing:



The usefulness of an integrated timing is manifold, for example to calculate an eyepiece field of view is enough to bring a reference star on the edge of the framed area with micro-metric movements in a clockwise direction (for northern latitudes), to start the timer and simultaneously block the clockwise movement with the joystick; when the star reaches the opposite edge, stop the timer and release the joystick. At this point simply multiply the measured time (converted into seconds) for 15 and we have the framed area in seconds of arc.

Use of the keyboard:



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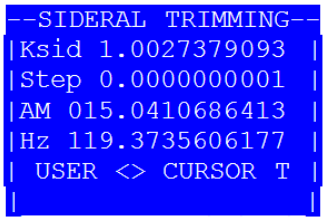
JKL 5 SIDEREAL TRACKING IMPROVEMENT

This command allows you to vary arbitrarily the speed of sidereal tracking or to calculate it exactly for the current date.
The changes that are made are applied in real time and, therefore, it it possible to see its effect on the tracking.

The panel that appears is the following:



Use of the keyboard:

0	Set the Step value at 0.0000000001
1	Set the Step value at 0.0000000010
ABC 2	Set the Step value at 0.0000000100
DEF 3	Set the Step value at 0.0000001000
GHI 4	Set the Step value at
JKL 5	Set the Step value at 0.0000100000
MNO 6	Set the Step value at 0.0001000000
PQRS 7	Set the Step value at 0.0010000000
TUV 8	Set the Step value at 0.0100000000
WXYZ 9	Set the Step value at 0.1000000000
⇦	Subtracts the value of Step to Ksid
⇨	Sum the Step value to the Ksid values
BCKSP	Ksid is set at the average value of the sidereal day (default 1.002737909350795)
DEL	Ksid is calculated with reference to the present date
RETURN	The Ksid value is saved in EEPROM and used again afterward
ESC	No change is applied to Ksid

WARNING: if you press RET key, the value changed by this command is memorized and it will be used as default even after the turn OFF of the device.

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PQRS 7 CONFIGURATION

This is the panel that appears:

--RA TRANSMISSION--|	**01) Parameters related to the right ascension transmission**
|Main ####.####### |	02) Number of teeth of crown gear or reduction ratio in Right Ascension (RA from now on)
|Sec. ####.####### |	03) Reduction ratio possibly present in RA before the crown gear, if not present, set 1
|Inv. Rotation $$$ |	04) Set YES if the direction of rotation in RA is inverted
|Dead Pulse #### |	05) Number of steps to apply at any inversion of the direction of rotation
|Motor Resol. ### |	06) Number of steps / rev of the motor used in RA. Typically 48, 100, 200 steps / rev
--RA POSITIONING---|	**07) Parameters related to the slewing in RA**
|Fraction ### |	08) Fraction of the motor used for slewing in RA. Accepted values from 1 to 500 = 400 to 200000 steps / rev
|Hi. Speed ####.#X |	09) Maximum slewing speed used in RA. It is expressed as N times the sidereal speed
|Lo. Speed ####.#X |	10) Minimum slewing speed used in RA. It is expressed as N times the sidereal speed
|Current ####mA|	11) Phase current used in RA for slewing
|Smart Mode $$$ |	12) Possible values YES/NO. Just for GERMAN mounts. By YES you have a convenient location for the observer.
--RA TRACKING------|	**13) Parameters related for the tracking in RA**
|Fraction ### |	14) Fraction of the motor used for slewing in RA. Accepted values from 1 to 500 = 400 to 200000 steps / rev
|Current ####mA|	15) Phase current used in RA for tracking
|CW Correc.###.#X |	16) Speed for clockwise MICROCORRECTIONS. It is expressed as N times the sidereal speed
|CCW Correc.###.#X |	17) Speed for counter-clockwise MICROCORRECTIONS. It is expressed as N times the sidereal speed
|Max Err. #.#####" |	18) Maximum permissible error in seconds of arc per 1 second of time
--DE TRANSMISSION--|	**19) Parameters related to the declination transmission**
|Main ####.####### |	20) Number of teeth of crown gear or reduction ratio in Declination (DE)
|Sec. ####.###### |	21) ratio possibly present in DE before the crown gear, if not present, set 1
|Inv. Rotation $$$ |	22) Set YES if the direction of rotation in DE is inverted
|Dead Pulse #### |	23) Number of steps to apply at any inversion of the direction of rotation
|Motor Resol. ### |	24) Number of steps / rev of the motor used in DE. Typically 48,100,200 steps / rev
--DE POSITIONING---|	**25) Parameters related to the slewing in DE**
|Fraction ### |	26) Fraction of the motor used for slewing in DE. Accepted values from 1 to 500 = 400 to 200000 steps / rev
|Hi. Speed ####.#X |	27) Maximum slewing speed used in DE. It is expressed as N times the sidereal speed
|Lo. Speed ####.#X |	28) Minimum slewing speed used in DE. It is expressed as N times the sidereal speed
|Current ####mA|	29) Phase current used in DE for slewing
--DE TRACKING------|	**30) Parameters related to the tracking in declination**
|Fraction ### |	31) Fraction of the motor used for slewing in DE. Accepted values from 1 to 500 = 400 to 200000 steps / rev
|Current ####mA|	32) Phase current used in DE for slewing
|CW Correc.###.#X |	33) Speed for clockwise MICROCORRECTIONS. It is expressed as N times the sidereal speed
|CCW Correc.###.#X |	34) Speed for counter-clockwise MICROCORRECTIONS. It is expressed as N times the sidereal speed
|Max Err. #.#####" |	35) Maximum permissible error in seconds of arc per 1 second of time
--MOUNT-----------|	**36) Type of mount**
|Type $$$$$$$$$$ |	37) GERMAN or FORK mount typology
--JOYSTICK---------|	**38) Direction of rotation by joystick**
|RA Mov.Invert $$$ |	39) If YES, it inverts the directions of the slewing by joystick in RA
|DE Mov.Invert $$$ |	40) If YES, it inverts the directions of the slewing by joystick in DE
|RA Falling 10000 |	41) Specifies the max number of steps to execute at the release of the joystick in the fast RA slewing to slow
|DE Falling 10000 |	42) Specifies the max number of steps to execute at the release of the joystick in the fast DE slewing to slow
--TRIGGER----------|	**43) Trigger generation at the end of slewing**
| Enable $$$ |	44) YES enables the trigger signal generation the at the end of slewing
| Output $$$ |	45) Output used for the trigger generation: OC1, PO0, PO1, PO2, PO3
| Pulse W. ######us|	46) Trigger signal duration in microseconds
| Input $$$ |	47) Acquired input trigger signal: PI0, PI1, PI2, PI3
| Delay ####s |	48) Delay to execute by the acquired trigger in seconds
--PEC--------------|	**49) Settings for PEC by hardware synchronization**
| Enable $$$|	50) YES enables the synchronized PEC
| Hardware Sync $$$|	51) Input signal used for the synchronization: PI0, PI1, PI2, PI3
| Active Level $$$$|	52) Active signal level: LOW,HIGH
--ALARMS-----------|	**53) Alarm management**
| Enable $$$|	54) YES enables the alarm controls
| Active Level $$$$|	55) Signal level active: LOW, HIGH

This panel manages the configuration of PALOMAR. When you change a parameter, you must be sure of its value since the instrument's performance can also be significantly affected by this. In all cases, whatever the value entered, it can never be a cause of electrical damage.
This is a panel that can simply be displayed for verification or edited with F4 to change the values.
This is a panel that can simply be displayed for verification or edited with F4 to change its values. All content is stored in EEPROM.
When you are sure of the parameters set, we suggest to always make a back up of the same, using a PC connected with its management program or saving the contents in one of four areas of memory available.

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EPHEMERIDES

It calculates the position of planets, sun, moon and some time values.
Every time you press F1 all fields are updated with the current value of time ..

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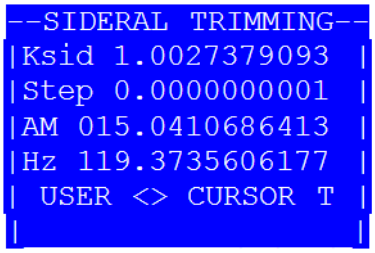
ARBITRARY TRACKING ON BOTH AXES

As said, PALOMAR is able to execute arbitrary tracking on both axes.
The panel appearing is the following:



It enables the axis or axes on which you want to set the arbitrary tracking, it provides the sense of rotation and angular motion in seconds of arc (AS).
Thereafter, to enable the tracking programmed, you must select the USER command by SELECTION TRACKING (1).

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SERIAL CONNECTION

PALOMAR has two RS232 serial channels; generally, just one channel is reported on the input/output connector Y2. This is because to permit the updating of the management software it is necessary two control signals that take the place of the second channel.
It is also possible to order the PALOMAR version with the two serial channel both present on Y2, but in this case you have to take into account that to re-program it, you have to dismount it and have access to an inner connector.
The serial communication is set to 9600,8,N,1 and it allows to receive LX200 commands by most of astronomy programs.
PALOMAR version 1.0.0 correctly works on these programs:

1. SkyMap Pro 8
2. The Sky 6
3. Cartes Du Ciel 3.0

The LX200 commands recognized are:
GR,GD,GA,GZ,GS,SS,GL,Ga,SL,GC,SC,Gt,St,Gg,Sg,GG,RC,RG,RS,RM,Me,Mn,Ms,Mw,Qn,Qs,Qe,Qw,U#,Gr,Sr,
Gd,Sd,MS,Q#,P#,CM,GT,GVT,GVP,GVD,GVN,T,T-,T+,TQ

At the same time, PALOMAR recognizes, by the use of a proprietary format, an higher number of commands for which you can find documentation in the following chapters.

Now, let's see how to connect PALOMAR to you personal computer.
Supplied is already present a two-meter cable with 9-pin connector, following is a complete documentation for those who want to make all this by himself.

In personal computers there are one or more serial ports, of two different possible types: at 9 o 25 PINS.

We need only three of all present signals:
Receive data
Transmit data
Signal ground

Depending on the type of connector, these signals are in different pins, the table below shows the disposition.

DB9	DB25	Function
1	8	Data carrier detect
2	3	Receive data
3	2	Transmit data
4	20	Data terminal ready
5	7	Signal ground
6	6	Data set ready
7	4	Request to send
8	5	Clear to send
9	22	Ring indicator

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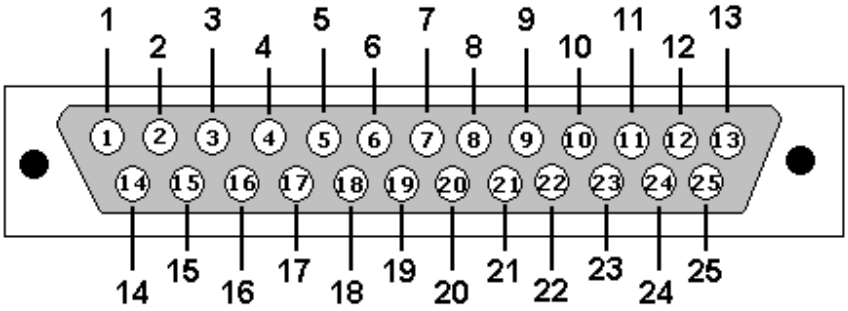
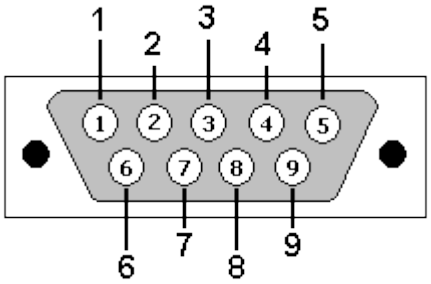
To identify the numeration of the RS232 connector's pins, the images below can be very useful:





The supplied connector requires the use of the DB9 under this disposition:

DB9	DB9 PALOMAR	PC Function
2	2	Receive data
3	3	Transmit data
5	5	Signal ground

Instead, if you want to build a cable directly from Y2, the connection becomes:

DB9 PC	Y2 PALOMAR	PC Function
2	12	Receive data
3	11	Transmit data
	25-14	RTS at ground
	25-13	DTR at ground
5	25	Signal ground

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PROGRAMMING CABLE

It could also be very useful the programming cable, which is necessary when you intend to reprogram the PALOMAR with a new version of the program. It is possible to purchase this cable online, but here are a few basic guidelines on how build it by yourselves.
Let always use a shielded cable connecting the braided wire to PIN5 of the DB9 and to PIN25 of Y2 of Palomar.

DB9	Y2 PALOMAR	PC Function
7	14	Request to send
2	12	Receive data
3	11	Transmit data
4	13	Data terminal ready
5	25	Signal ground

WARNING: always connect the pins 13 and 14 to the ground if you don't use the programming cable.

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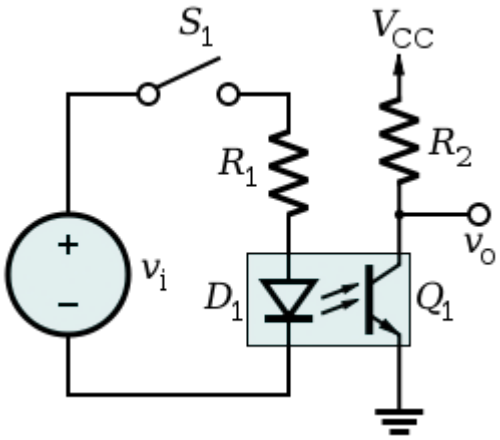
JOYSTICK OR AUTOGUIDE CONNECTION

Both the joystick and the auto guide a refer to the same inputs, since they are alternatives to each others. Every input is opto-isolated and it represents a guarantee for the noise and the safety of the PALOMAR even when you use very long cables.

For each input of the auto guide, it exists an opto-isolator.
The scheme alongside reports exactly a PALOMAR input.
The resistance R1 is 470 ohms and it is internal.
S1 is the contact the auto guide must have, while Vi is the voltage generator ranging from 5 to 12 volts.
The same considerations are valid even for an external keyboard or joystick.
In the example below, it is reported the connection to make for the use of an ST4 type of auto guide.



CONNECTION PALOMAR - ST4

CAVO JOYSTICK	PIN Y2 PALOMAR	PIN CONNECTOR RELAYS ST4	DESCRIZIONE
7	26	-	Common (cathode) of the optoisolators. Connect to the ground of the external generator Vi
	-	5,8,11,14	Common relays ST4. Connect at positive electrode of Vi
2	24	10	X+ (OI[2])
1	23	4	X- (OI[3])
4	22	13	Y+ (OI[0])
3	21	7	Y- (OI[1])

For very short connections and when you use a shielded cable, it is possible to use the +5 volts tension present on pin 2 of the Y2 connector as Vi generator, by interposing a 47 ohms resistance in series and connecting the pins 25-26 together.
Pay attention: this kind of connection is strongly discouraged since it is subject to noise and not reliable.
You can find free software that by the use of a web cam connected to the PC by the USB and of the PALOMAR, connected to the PC by a parallel port, optimally perform the functions of an auto guide system.
In this case, it is sufficient to connect the ground of the PC, present on pins 18,19,20,21,22,23,24,25 (one is enough!) to the pin 26 of Y2 and connect the control pins (these change depending on the software) respectively to the control pins 21,22,23,24.
Pay attention: if you use the same PC even for the remote control by RS232 you nullified the galvanic isolation!

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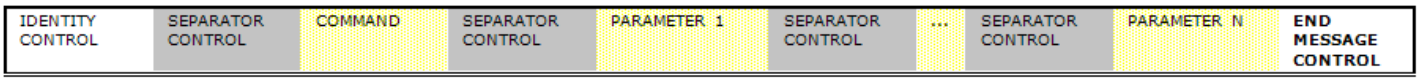
PROPRIETARY SERIAL PROTOCOL

Other than recognize the commands with LX200 format, PALOMAR has also a proprietary format allowing you the possibility to control and set it wider than LX200 format can allow.
Both of the format are accepted and they are very different with respect to syntax used.
Communicate with PALOMAR means transmit and receive typically only text messages in ASCII format.
For "typically" we intend that the protocol can be defined by the user and it is possible to choose also non-text characters.

The protocol herein described is the default one set during the testing of the instrument.

The proprietary serial protocol used has three possible type of fields:
Control, you can use this field for:
Identity: this field indicates the base address identifying the PALOMAR of message destination; typically it is a number of maximum 2 digits.
Separator: it is a character used to separate logically the fields between them.
End of message: it is a character identifying the end of message.
Command: it is a command of three ASCII characters identifying the command that the PALOMAR must run.
Parameter/s: Zero or at maximum 15 parameter specific of the command to run.

Here below an example composition of a command transmitted to PALOMAR:



Let's see a real message:
$0,REV_{CR}$

in C language the string is defined as follows:

"0,REV\r"

Analyzing it:
The character '0' is the identifying number of PALOMAR, the character ',' is the separator, 'REV' is the command, '\r' e' is the character of control of end string.

If you are using only one PALOMAR by the serial port, it is possible to skip the CONTROL IDENTITY, so the previous message becomes:

"REV\r"

You can even use this modality when there are many PALOMARs connected by the same serial port; however, you have take into account that only the one directly connected to the serial port of the system is able to receive the commands.

At the contrary, it could be useful to send the same commands to all the PALOMARs connected, you can do it indicating the sequence of characters '##' instead of the the NUMBER IDENTITY, so the message becomes:

"##,REV\r"

There is also the possibility to enable a control for the integrity of the messages; to do it, by a command you can enable the generation and control of a 16 bit CRC.

This type of control gives a high reliability on the integrity of the received message.

If we enable the CRC, the previous message becomes:

$0,REV,18149_{CR}$

The characters highlighted in yellow are the ones used for the calculation of CRC.
In case the received CRC is different from the one calculated, the response is:

$0,CRC,55991_{CR}$

Instead, if the CRC is right, we receive:

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0,100,55487$_{CR}$

More info on CRC at the website:

http://it.wikipedia.org/wiki/Cyclic_redundancy_check

It's very important to underline the first parameter indicated by PALOMAR in the response message is its identity number.

A brief note on the notation used:
[] The square brackets enclose optional fields

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PROPRIETARY SERIAL COMMANDS

In the following pages you can find a complete list of the commands run by PALOMAR.
For all the examples, we assume that: 1) the identity number of PALOMAR is 0; 2) the decimal mode is active; the separator used is a comma; the terminator character is CR (13); the CRC control is disabled. Otherwise it would change the parameters encoding or the response codes.

DIGITS indicates the number of hexadecimal digits when HEX mode is active.

For all the commands returning a state, these are the possible messages:

TEXT	INDEX OF STATUS	DESCRIPTION
ACK	0	Successfully executed command
NAK	1	Not recognized command
BPN	2	Wrong number of parameters
POR	3	Parameter out of range
UNS	4	Not supported mode
CRC	5	CRC failure on received string

As for the commands, the error codes can be text type or numeric index depending on the choice of the user; you can switch from one type to the other by the use of VRB command.

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REV

COMMAND				DESCRIPTION
TEXT		INDEX		
REV		000		Return the remote management program revision.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		4	100-1000	Program revision
DETAIL				
Command used to know the program revision. If it returns the value 100, it means 1.0.0.				
EXAMPLE				
⇦				⇨
REV$_{CR}$				0,100$_{CR}$

HST

COMMAND				DESCRIPTION
TEXT		INDEX		
HST		001		Return the temperature of the heat sink.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	0-255	Heat sink temperature
DETAIL				
Command used to know the operating temperature of the heat sink in degrees centigrade.				
EXAMPLE				
⇦				⇨
HST$_{CR}$				0,27$_{CR}$

MMC

COMMAND				DESCRIPTION
TEXT		INDEX		
MMC		002		Set the max current of the motors.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Set motor. 0 = RA, 1 = DE
1	4	0	2800	Max current of the motor in mA
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	CODE	Operation result
DETAIL				
Command used to set the maximum current of the motors.				
EXAMPLE				
MMC,0,2000$_{CR}$				0,ACK$_{CR}$

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RMC

COMMAND				DESCRIPTION
TEXT		INDEX		
RMC		003		Return the current of the used motors.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Set motor. 0 = RA, 1 = DE
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		4	0-2800	Current in use in mA
DETAIL				
Command used to know the current in use on the selected motor.				
EXAMPLE				
RMC,0$_{CR}$				0,2000$_{CR}$

OFF

COMMAND				DESCRIPTION
TEXT		INDEX		
OFF		004		Turn off the PALOMAR.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		3	OFF	
DETAIL				
By this command you can turn off the PALOMAR by remote connection				
EXAMPLE				
OFF$_{CR}$				0,OFF$_{CR}$

THS

COMMAND				DESCRIPTION
TEXT		INDEX		
THS		005		Temperature threshold to start on the fan
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
1	2	0	99	Temperature in degrees centigrade
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	CODE	Operation result
DETAIL				
Set the temperature threshold measured on the inner heat sink in the order to turn on the fan				
EXAMPLE				
THS,55$_{CR}$				0,ACK$_{CR}$

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RTH

COMMAND				DESCRIPTION
TEXT		INDEX		
RTH		006		Return the temperature threshold
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	0-99	Heat sink temperature
DETAIL				
Return the temperature threshold above which turns on the fan				
EXAMPLE				
RTH_{CR}				$0,55_{CR}$

EEW

COMMAND				DESCRIPTION
TEXT		INDEX		
EEW		009		Write a byte in the EEPROM at the specified address
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
1	2	0	255	Byte
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	CODE	Operation result
DETAIL				
Write a byte in the EEPROM at the specified address. Attention! An area of the EEPROM is reserved to the PALOMAR settings, a wrong writing is cause of malfunctioning				
EXAMPLE				
$EEW,16384,27_{CR}$				$0,ACK_{CR}$

EWW

COMMAND				DESCRIPTION
TEXT		INDEX		
EWW		010		Write a (16 bit) word in the EEPROM at the specified address
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
1	4	0	65535	Word
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	CODE	Operation result
DETAIL				
Write a (16 bit) word in the EEPROM at the specified address. Attention! An area of the EEPROM is reserved to the PALOMAR settings, a wrong writing is cause of malfunctioning				
EXAMPLE				
$EEW,16384,1957_{CR}$				$0,ACK_{CR}$

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ELW

COMMAND				DESCRIPTION
TEXT		INDEX		
ELW		011		Write a (32 bit) long word in the EEPROM at the specified address
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
1	8	0	4294967295	Long Word
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	CODE	Operation result
DETAIL				
Write a (32 bit) long word in the EEPROM at the specified address. Attention! An area of the EEPROM is reserved to the PALOMAR settings, a wrong writing is cause of malfunctioning				
EXAMPLE				
EEW,16384,1961957$_{CR}$				0,ACK$_{CR}$

EDW

COMMAND				DESCRIPTION
TEXT		INDEX		
ELW		011		Write a (64 bit) floating point number in the EEPROM at the specified address
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
1	8	1E-37	1E+37	Floating point number
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	PALOMAR identifier
1		2	CODE	Operation result
DETAIL				
Write a (64 bit) floating point number in the EEPROM at the specified address. Attention! An area of the EEPROM is reserved to the PALOMAR settings, a wrong writing is cause of malfunctioning				
EXAMPLE				
EEW,16384,1957.34567$_{CR}$				0,ACK$_{CR}$

EER

COMMAND				DESCRIPTION
TEXT		INDEX		
EER		013		Read a byte of the EEPROM at the specified address.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	0-255	Contents of the memory
DETAIL				
Read a byte of the EEPROM at the specified address (in the example given, it is not said that 206 is the content of the cell 3184).				
EXAMPLE				
EER,3184$_{CR}$				0,206$_{CR}$

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EWR

COMMAND				DESCRIPTION
TEXT		INDEX		
EWR		014		Read a (16 bit) word of the EEPROM at the specified address.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		4	0-65535	Contents of the memory
DETAIL				
Read a (16 bit) word of the EEPROM at the specified address (in the example given, it is not said that 21065 is the content of the 33174).				
EXAMPLE				
EWR,33174$_{CR}$				0,21065$_{CR}$

ELR

COMMAND				DESCRIPTION
TEXT		INDEX		
ELR		015		Read a (32 bit) long word of the EEPROM at the specified address.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		4	0-65535	Contents of the memory
DETAIL				
Read a (32 bit) long word of the EEPROM at the specified address (in the example given, it is not said that 65 is the content of the 1024372).				
EXAMPLE				
ELR,65$_{CR}$				0,1024372$_{CR}$

EDR

COMMAND				DESCRIPTION
TEXT		INDEX		
EDR		016		Read a real number from the EEPROM at the specified address.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	0	131071	EEPROM address
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		4	0-65535	Contents of the memory
DETAIL				
Read a real number from the EEPROM at the specified address ((in the example given, it is not said that 1331 is the content of the 3.14159265).				
EXAMPLE				
EDR,1331$_{CR}$				0,3.14159265$_{CR}$

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ILP

COMMAND				DESCRIPTION
TEXT		INDEX		
ILP		017		Read the port at 14 bit
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		4	0-16383	Contents of the memory
DETAIL				
Read the content of the input port at 14 bit, following the order ROW[0:7],IN[0:7].				
EXAMPLE				
EDR,1331$_{CR}$				0,3.14159265$_{CR}$

OLP

COMMAND				DESCRIPTION
TEXT		INDEX		
OLP		018		Write the port at 16 bit.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	4	0	65535	16 bit word to write on the port
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Write the port at 16 bit, the involved signals are COL[0:7],OUT[0:7]				
EXAMPLE				
OLP,1$_{CR}$				0,ACK$_{CR}$

MEN

COMMAND				DESCRIPTION
TEXT		INDEX		
MEN		019		Enable or disable the motors.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection
1	2	0	1	0 = disabled, 1 = enabled
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Enable or disable the motors.				
EXAMPLE				
MEN,0,1$_{CR}$				0,ACK$_{CR}$

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SME

COMMAND				DESCRIPTION
TEXT		INDEX		
SME		020		Read the enabling of the motors.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	0-1	0 = disabled, 1 = enabled
DETAIL				
Read the enabling of motors.				
EXAMPLE				
SME,1$_{CR}$				0,1$_{CR}$

FRC

COMMAND				DESCRIPTION
TEXT		INDEX		
FRC		021		Set the fractionation of the motors.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	3	Program selection
1	2	1	500	Fractionation (N * 400)
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Set the fractionation of the motors. Motors can execute tracking and slewing, for each operation (program) it is possible to set a different fractionation: 0 = Slewing axis 0 1 = Tracking axis 0 2 = Slewing axis 1 3 = Tracking axis 1				
EXAMPLE				
FRC,0,25$_{CR}$				0,ACK$_{CR}$

CMF

COMMAND				DESCRIPTION
TEXT		INDEX		
CMF		022		Read the set fractionation.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	3	Program selection
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	1-500	Frazionamento (N * 400)
DETAIL				
Read the fractionation sets for each of the available program.				
EXAMPLE				
CMF,0$_{CR}$				0,25$_{CR}$

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RES

COMMAND				DESCRIPTION
TEXT		INDEX		
RES		023		Reset the AMS
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Reset AMS				
EXAMPLE				
RES$_{CR}$				0,ACK$_{CR}$

MPF

COMMAND				DESCRIPTION
TEXT		INDEX		
MPF		024		Set the maximum frequency (Hz).
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	1	500000	Frequency in Hz
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Set the maximum frequency (Hz).				
EXAMPLE				
MPF,50000$_{CR}$				0,ACK$_{CR}$

SMF

COMMAND				DESCRIPTION
TEXT		INDEX		
SMF		025		Read the maximum frequency (Hz).
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		8	1-500000	Frequency in Hz
DETAIL				
Read the maximum frequency (Hz).				
EXAMPLE				
SMF$_{CR}$				0,50000$_{CR}$

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ESF

COMMAND				DESCRIPTION
TEXT		INDEX		
ESF		026		Set the sampling frequency (Hz) of the encoders.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	8	1	500000	Frequency in Hz
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Set the sampling frequency (Hz) of the encoders. Typically this frequency must be 4 times the maximum slewing frequency.				
EXAMPLE				
ESF,200000$_{CR}$				0,ACK$_{CR}$

SEF

COMMAND				DESCRIPTION
TEXT		INDEX		
SEF		025		Read the maximum sampling frequency (Hz) of the encoders.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		8	1-500000	Frequency in Hz
DETAIL				
Read the maximum sampling frequency (Hz) of the encoders.				
EXAMPLE				
SEF$_{CR}$				0,200000$_{CR}$

ECT

COMMAND				DESCRIPTION
TEXT		INDEX		
ECT		028		Read the number of counts of the encoders.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection 0,1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		8	0-2^{32}	Number of counts
DETAIL				
Read the number of counts of the encoders.				
EXAMPLE				
ECT,0$_{CR}$				0,33212$_{CR}$

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SEC

COMMAND				DESCRIPTION
TEXT		INDEX		
SEC		029		Set the number of counts of the encoders.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection
1	2	0	2^{32}	Number of counts
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Set the number of counts of the encoders.				
EXAMPLE				
SEC,0,0$_{CR}$				0,ACK$_{CR}$

POS

COMMAND				DESCRIPTION
TEXT		INDEX		
POS		030		Run a slewing on both axes.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Direction axis 0, 0 = CCW, 1 = CW
1	8	0	2^{32}	Number of steps to run axis 0
2	2	0	1	Direction axis 1, 0 = CCW, 1 = CW
3	8	0	2^{32}	Number of steps to run axis 1
4	8	0	2^{32}	Starting period axis 0
5	8	0	2^{32}	Period of max speed axis 0
6	8	0	2^{32}	Starting period axis 1
7	8	0	2^{32}	Period of max speed axis 1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Run a slewing on both axes. Starting and maximum speed periods give the acceleration and deceleration ramp. To get the used frequencies in Hz just divide the maximum slewing speed (set with the command MPF) by the number used plus one.				
EXAMPLE				
POS,0,332450,1,1234,20,2,15,2$_{CR}$				0,ACK$_{CR}$

PCT

COMMAND				DESCRIPTION
TEXT		INDEX		
PCT		031		Read the number of counts that motors have to run.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection 0,1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		8	0-2^{32}	Number of counts
DETAIL				
Once the slewing is run (command POS) it can read the countdown of the steps remaining to execute by the motors.				
EXAMPLE				
PCT,0$_{CR}$				0,39252$_{CR}$

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TRK

COMMAND				DESCRIPTION
TEXT		INDEX		
TRK		032		Set the tracking on both axes.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection
1	8	0	2^{32}	Primary period
2	8	0	2^{32}	Number of primary periods
3	8	0	2^{32}	Secondary period
4	8	0	2^{32}	Number of secondary periods
5	8	0	1	Direction axis 0, 0 = CCW, 1 = CW
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
This command allows you to set an arbitrary tracking on both axes. The frequency of steps is established by setting the time to be used which is equal to the maximum frequency of slewing divided the value of the period. If the frequency you want has no fractional, the primary period is equal to the secondary and the number of periods is the same; otherwise, the primary will be run for a certain period (e.g. positive deviation) and then it will be run the secondary period (e.g. negative deviation) so that the average period is centered (in an error limit) on the value you desire.				
EXAMPLE				
TRK,0,100,373,1234,20,0$_{CR}$				0,ACK$_{CR}$

ETK

COMMAND				DESCRIPTION
TEXT		INDEX		
ETK		033		Enable the tracking on an axis.
COMMAND				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection
1	2	0	1	Disable 0, Enable 1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
After sets a tracking by the command TRK, it's possible to run or not it by this command.				
EXAMPLE				
ETK,0,1$_{CR}$				0,ACK$_{CR}$

TKS

COMMAND				DESCRIPTION
TEXT		INDEX		
TKS		034		Check the tracking activity.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Motor selection 0,1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		8	0-1	0 = Disabled, 1 = Enabled
DETAIL				
Check the tracking activity.				
EXAMPLE				
TKS,0$_{CR}$				0,1$_{CR}$

IOP

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COMMAND				DESCRIPTION
TEXT		INDEX		
IOP		035		Read the opto-isolated inputs of the encoders.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	0-15	Status of the port
DETAIL				
Generally the 4 opto-isolated bits of this port are dedicated to the encoders; however, if you use an open-loop system these inputs can be used for generic purposes.				
EXAMPLE				
IOP_{CR}				$0,8_{CR}$

SOC

COMMAND				DESCRIPTION
TEXT		INDEX		
SOC		036		ON/OFF open collector output.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Disable 0, Enable 1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
By this command you can control the output of the open collector present on pin 1 of Y17.				
EXAMPLE				
$SOC,1_{CR}$				$0,ACK_{CR}$

STO

COMMAND				DESCRIPTION
TEXT		INDEX		
STO		037		Write at 4 bit wide on the TTL amplified port.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	15	Contents of the port
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Write Write at 4 bit wide on buffered the port.				
EXAMPLE				
$STO,7_{CR}$				$0,ACK_{CR}$

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GTL

COMMAND				DESCRIPTION
TEXT		INDEX		
GTL		038		Read the inputs of the 4bit amplified port.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	0-15	Status of the port
DETAIL				
Read the 4bit input of the TTL port with buffer.				
EXAMPLE				
GTL_{CR}				$0,7_{CR}$

DAC

COMMAND				DESCRIPTION
TEXT		INDEX		
DAC		039		Set a voltage in one of two D/A converters.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Channel selection
1	4	0	4095	Output voltage
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
By this command you can set the output voltage of the two analog outputs.				
EXAMPLE				
$DAC,0,1023_{CR}$				$0,ACK_{CR}$

SRC

COMMAND				DESCRIPTION
TEXT		INDEX		
SRC		040		Set the internal clock.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	4	1900	2050	Year
1	2	1	12	Month
2	2	1	31	Day
3	2	1	7	Day of the week
4	2	0	23	Hour
5	2	0	59	Minute
6	2	0	59	Second
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Set the internal clock.				
EXAMPLE				
$SRC,2010,1,10,2,9,9,20_{CR}$				$0,ACK_{CR}$

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RTC

COMMAND				DESCRIPTION
TEXT		INDEX		
RTC		041		Read the internal clock.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		4	1900-2050	Year
2		2	1-12	Month
3		2	1-31	Day
4		2	1-7	Day of the week
5		2	0-23	Hour
6		2	0-59	Minute
7		2	0-59	Second
DETAIL				
Read the internal clock.				
EXAMPLE				
RTC_{CR}				$0,2010,1,10,2,9,9,28_{CR}$

JOY

COMMAND				DESCRIPTION
TEXT		INDEX		
JOY		042		Read the status of the joystick.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
-	-	-	-	
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	0-15	Status of the port
DETAIL				
The opto-isolated inputs OPTO[2:5] are typically used for a 4 switch joystick for manual movements				
EXAMPLE				
JOY_{CR}				$0,1_{CR}$

EDE

COMMAND				DESCRIPTION
TEXT		INDEX		
EDE		047		Enable or disable the reading of the encoders.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	1	Disable 0, Enable 1
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
Enable or disable the reading of the encoders.				
EXAMPLE				
$EDE,1_{CR}$				$0,ACK_{CR}$

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SID

COMMAND				DESCRIPTION
TEXT		INDEX		
EDE		048		Set the identifier number.
PARAMETER				DESCRIPTION
#	Digits	Minimum Value	Maximum Value	
0	2	0	255	Identity number
RETURN				DESCRIPTION
#		Digits	Value	
0		2	0-255	AMS identifier
1		2	CODE	Operation result
DETAIL				
It sets AMS identifier. Attention: the return will use the new identifier.				
EXAMPLE				
SID,1_{CR}				$1,ACK_{CR}$

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SOFTWARE UPDATE

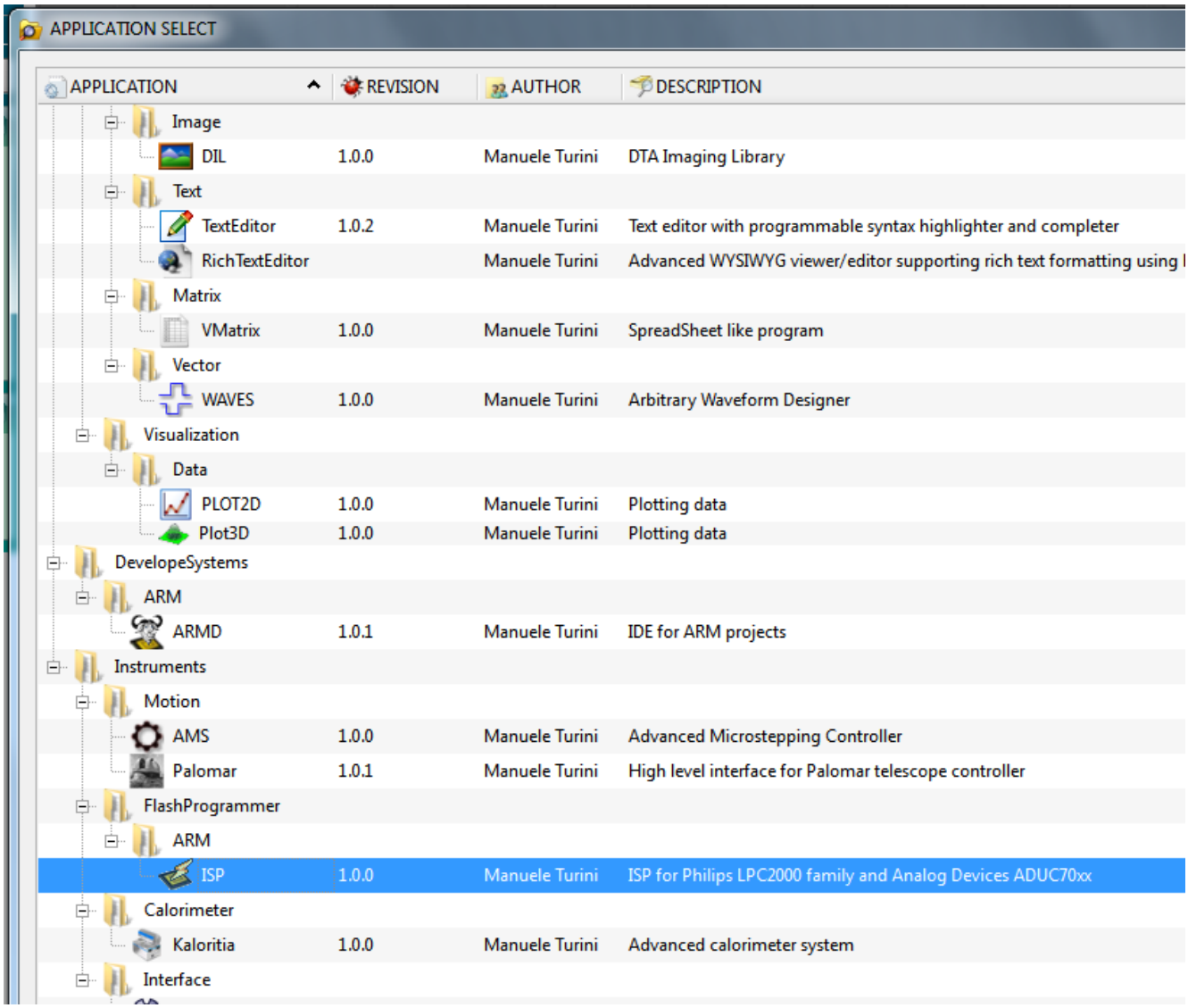
Update the PALOMAR management software is important since you can access to updated functions and resolution of possible malfunctions.
To update the internal code it is necessary you have already installed on your PC (XP/VISTA) the MDI working ambient included in the supplied CD-ROM and to have got the **programming cable** for which you can find documentation on following chapters.
Then, connect the programming cable to the and disconnect the motors.

If you installed the MDI on your PC you'll find the identifying icon:

Click on it and after few seconds its window will appear.

Press F9 or select the voice Applications from Window menu.

By a double click, select the ISP application from the application index:



Clicking on icon OPEN the following window will appear:

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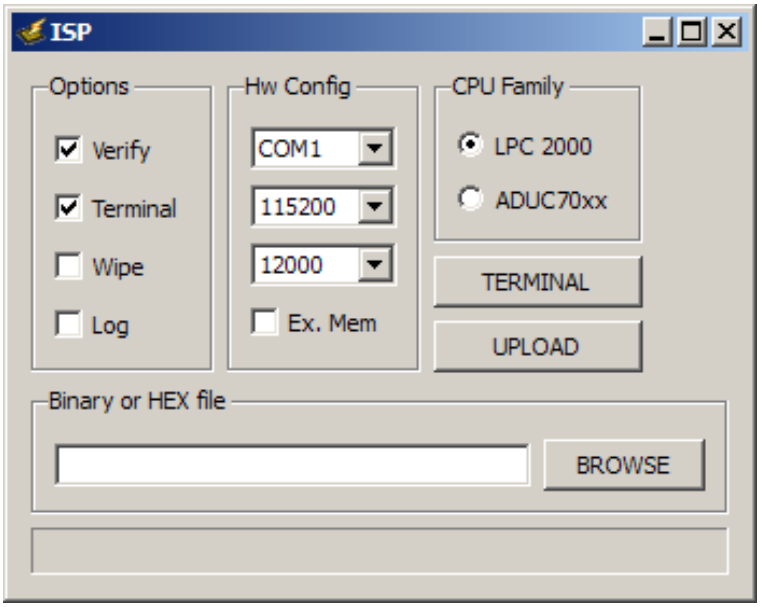

Settings must be as the ones reported above, except for the COM, that has to be set properly. Now, click on BROWSE command and look for the code file of the updating (.HEX extension).

Once the file has been uploaded, it is possible to begin the writing phase of the internal FLASH memory of the PALOMAR. To do it, you must press the ON button of PALOMAR, being careful not to release it during all the programming time, then click on the UPLOAD button of the ISP application.
Once the programming has be done, the PALOMAR is going to restart.

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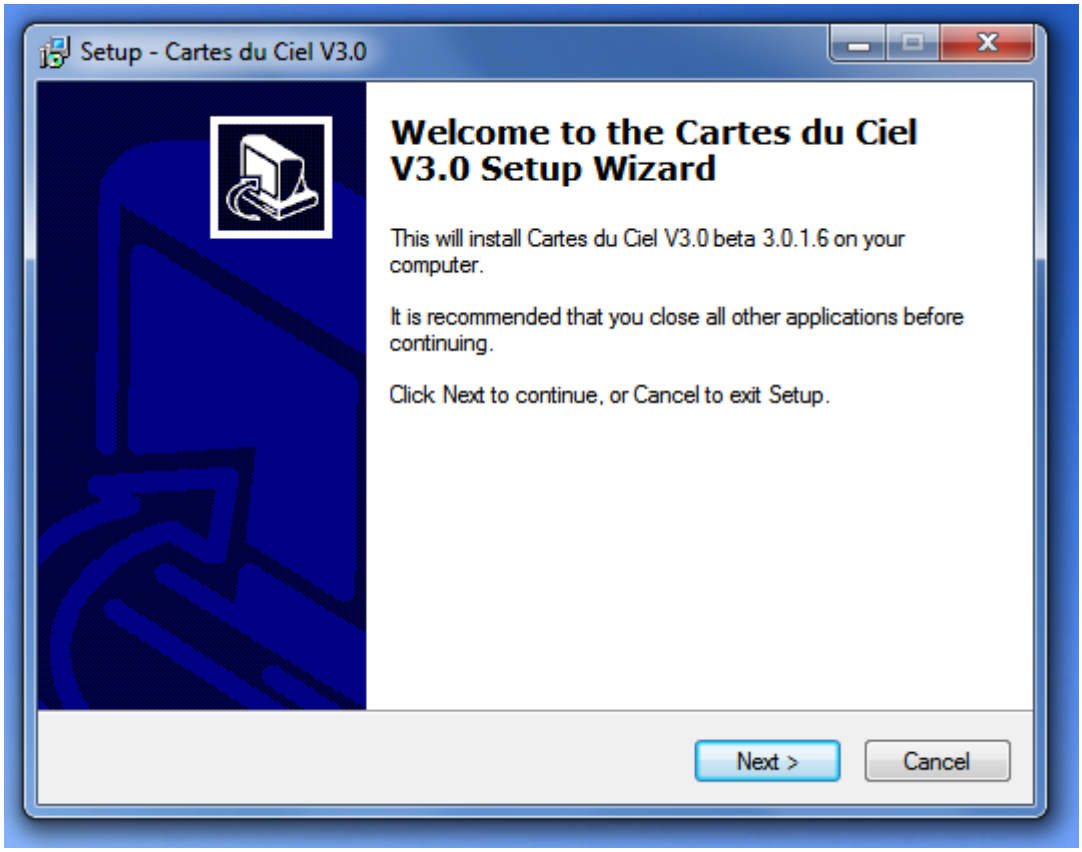
REMOTE CONTROL

The Palomar is LX200 compliance device, for this reason, it is possible to use it with all astronomy programs running with this telescope.
Each program has a own specific setup to install the driver necessary for the management of the telescope and it doesn't exist a common way of installation.
Here we describe how to install Cartes du Ciel V3.0, one of the most popular freeware of astronomical simulation and how to install the driver for LX200.
First, from the Cartes du Ciel website, let download the executable for the installation of the program and run it.
The classical installation window will appear:



Follow the indications of the installation program.
After installing the main program should now install the plug-in of Cartes du Ciel for LX200, you can find it on the website of the program itself, the file is called "cdcmeade.exe", download and run it.
Now, we can run the Cartes du Ciel and select the driver for LX200.
From the mani menu, select CONFIGURATION->SYSTEM, select the TAB TELESCOPE and in the field SELECT INTERFACE click on the button Plugin CdC.
Then, in the field PLUGIN CDC SETTINGS, select Meade.tid and press OK.

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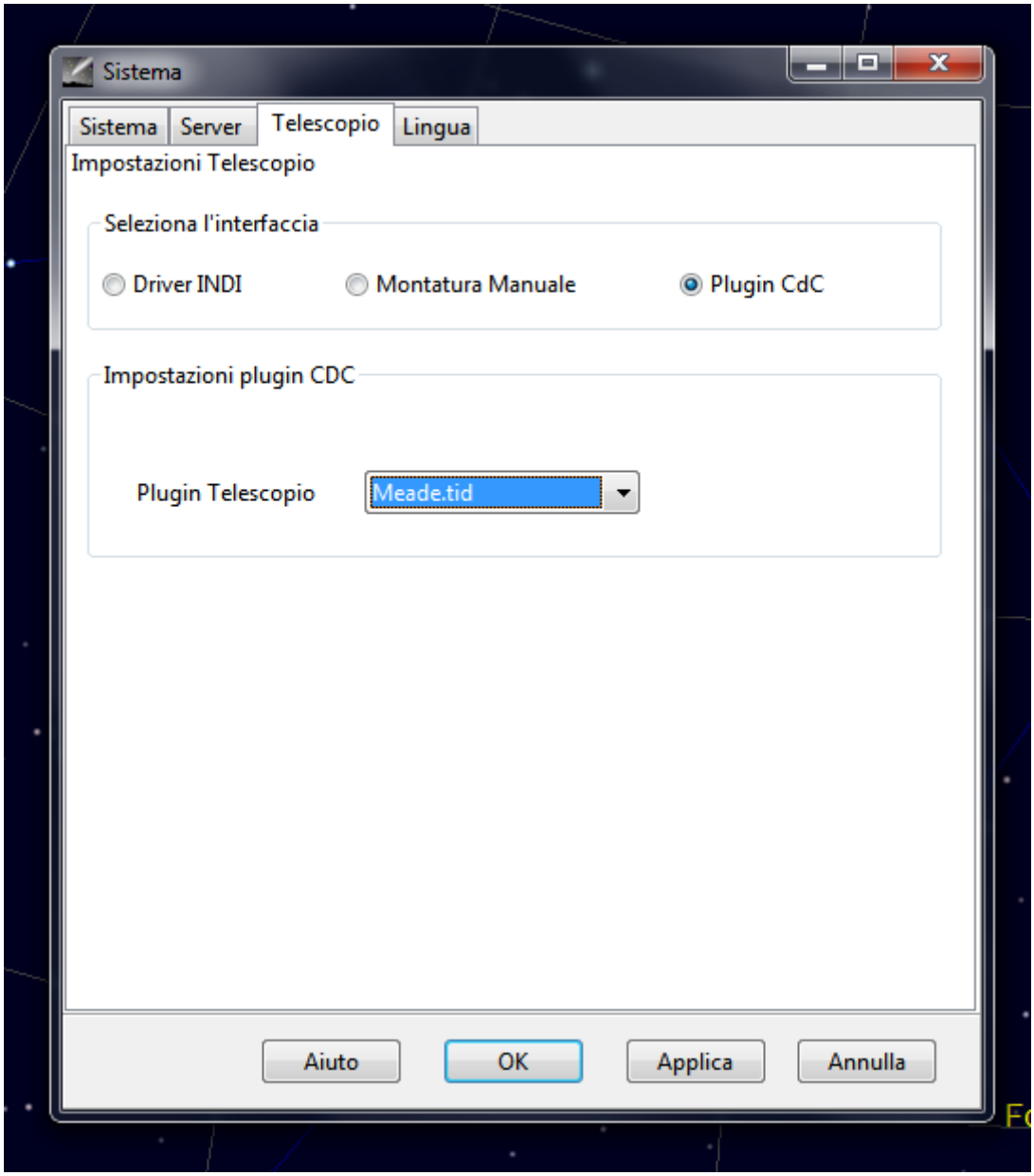
It should open the following window:



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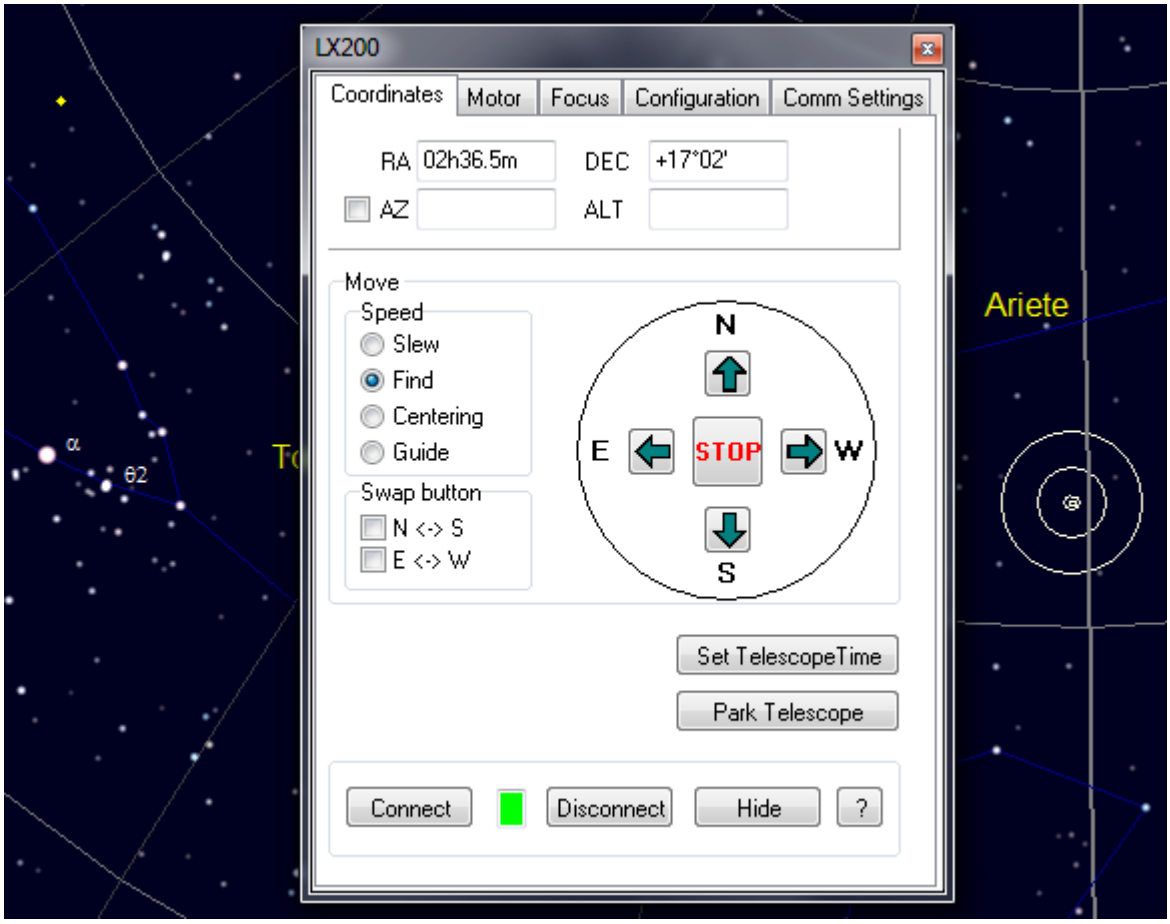
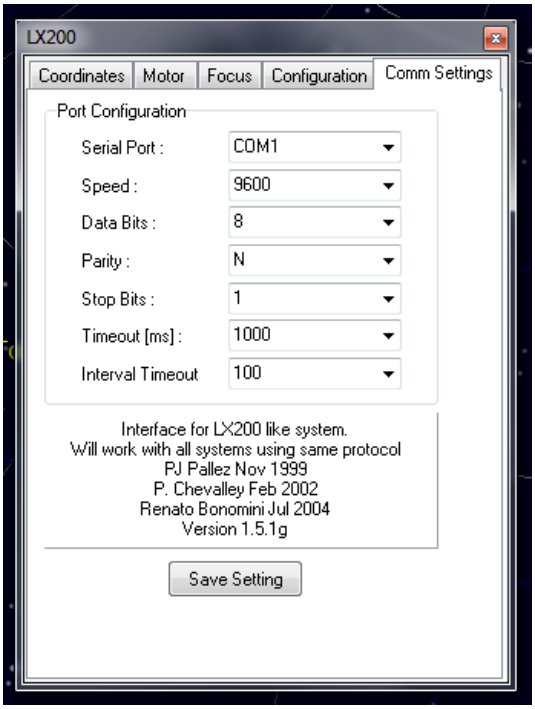
Now from the main menu, let select TELESCOPE->CONTROL PANEL and the typical panel will appear:



From the tab COMM SETTINGS select the serial port where your Palomar is connected:



Come back to the first panel and click on CONNECT button: if your Palomar is ON and good powered, you can manage it simply clicking on the objects present in the simulator.

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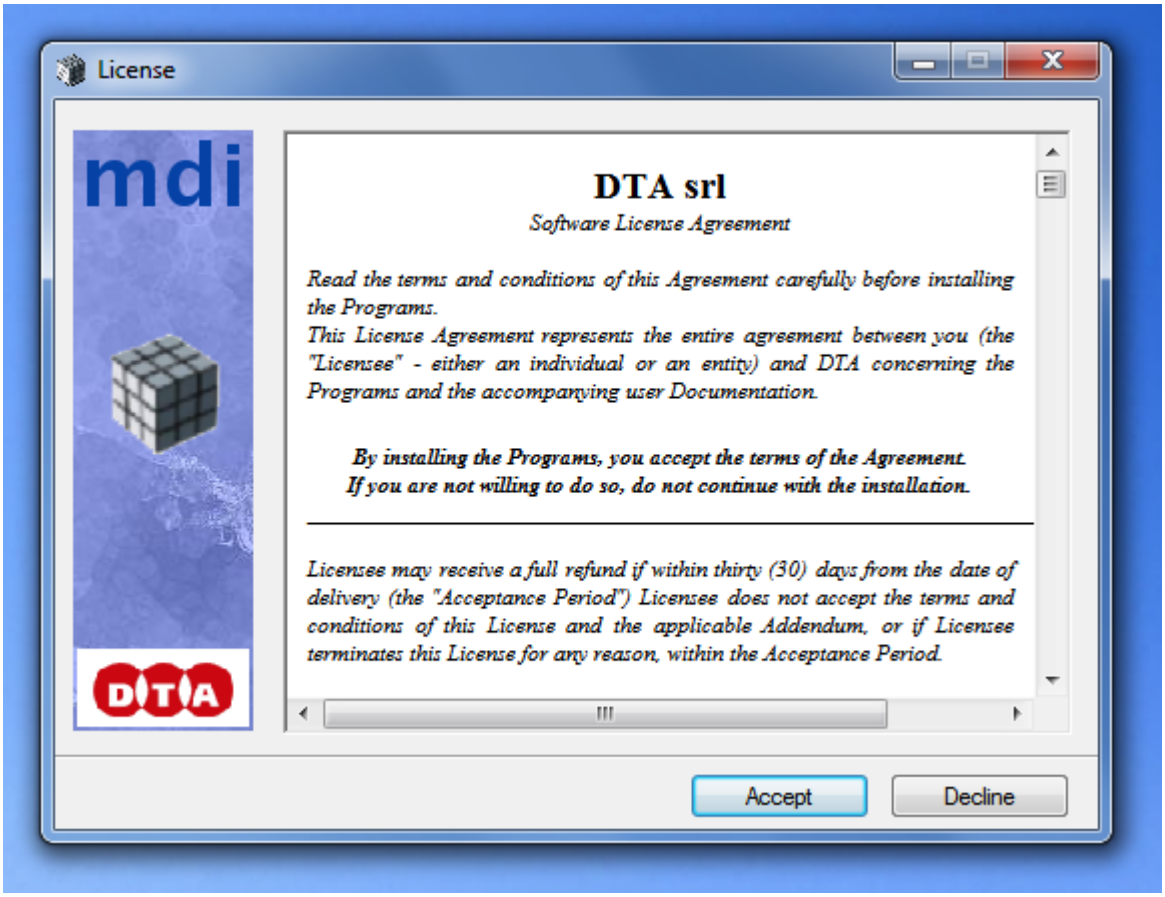
PROPRIETARY REMOTE CONTROL

In the CD-ROM supplied with Palomar there is even a program for management from PC with Operative Systems XP/Vista/7 that other than allows the setting and the total remote control of Palomar, it also offers the possibility to execute complex slewing in a very easy way.
The managing program of the Palomar is called MDI and it its the same we use for the updating fo the firmware and for the changing or writing of the firmware itself.
If not already done, let install it running the Palomar.exe program.
It appears the window:



Follow the instruction of the installation program.
After the program installation, on the desktop will appear icon

Click on it and the MDI window will appear.

<u>Attention: for the operative systems Vista and 7 you must execute MDI as administrator.</u>

If you configure MDI for the Palomar you will have the icon

If you don't have this icon, you have to select this application: press F9 or execute from the WINDOW-APPLICATIONS menu: a list of applications will appear, you have just to select Palomar.
since this is the first time you connect to Palomar we suggest you to make a backup of the settings of it, so let click on the icon
or select FILE->NEW.

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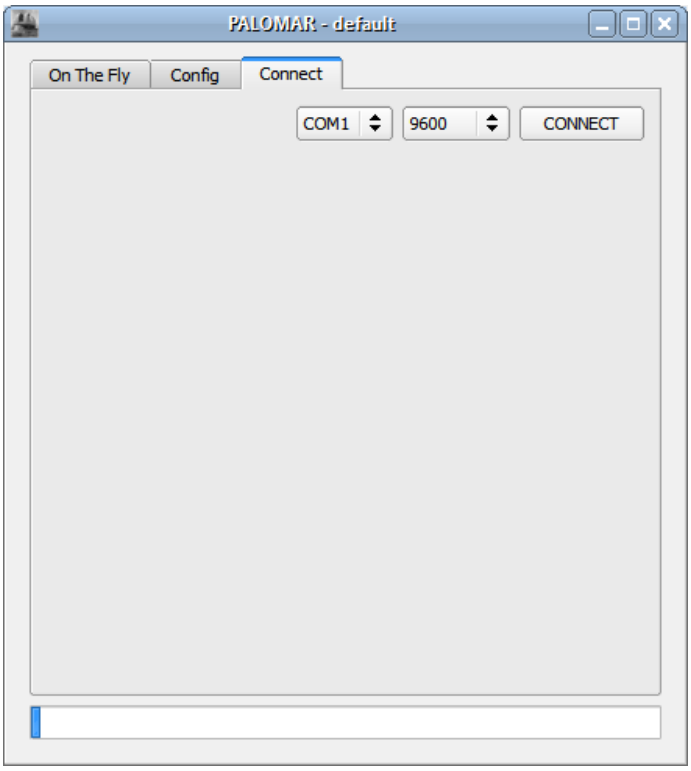
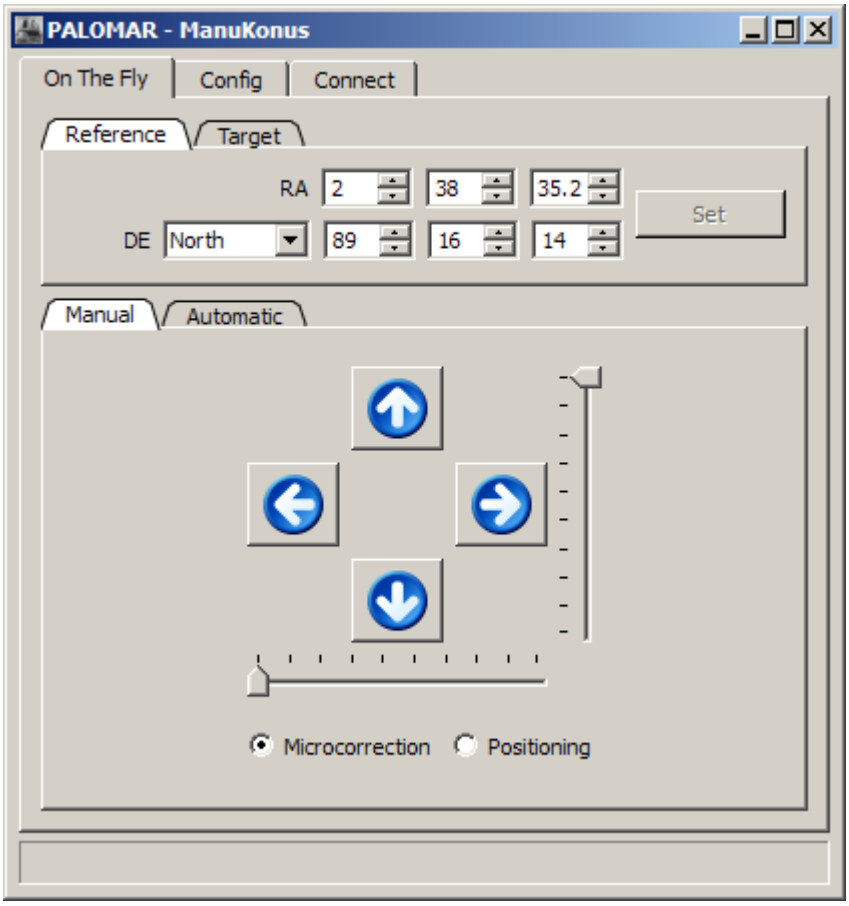
It appears the remote control panel of Palomar:



Select the serial port where Palomar is connected and click on CONNECT button: if the Palomar is ON and connected correctly you will have the following window:



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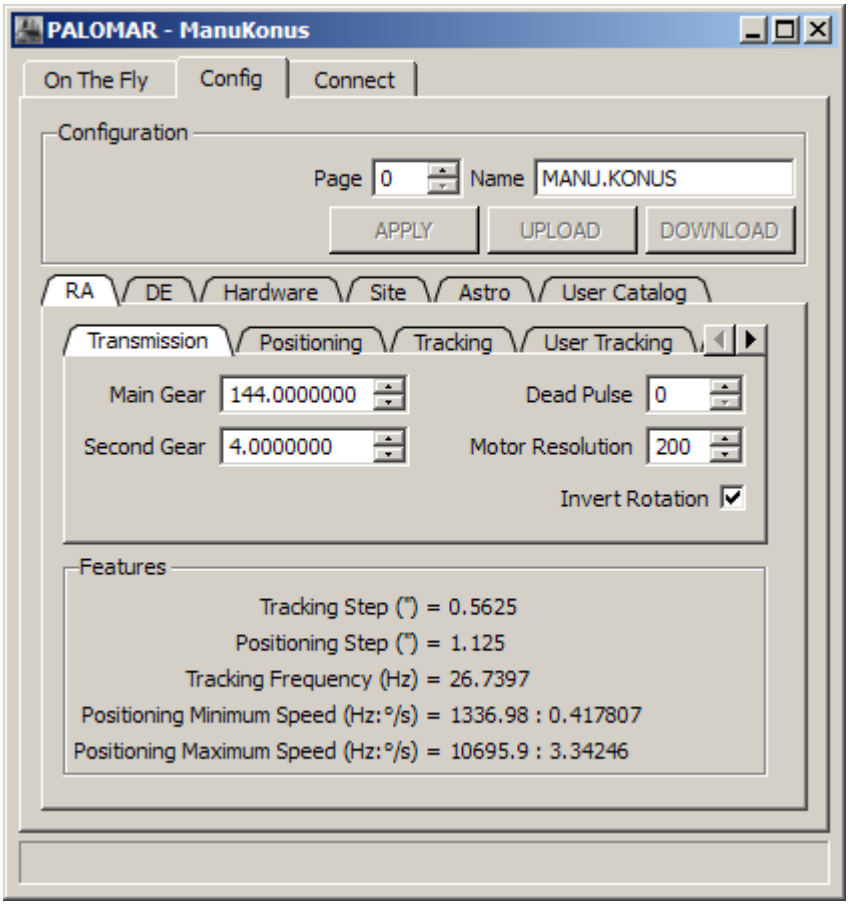
Select the tab CONFIG



Click on DOWNLOAD button. By this command, all the parameters of Palomar will be read and displayed.
Now, from the main menu, select FILE->SAVE AS and save the configuration of Palomar.
At the next running of MDI you can use the command FILE->OPEN to opne your configuration of the Palomar.
The program is intuitive and allows you to make by remote the same operations you do with the keyboard of the Palomar.
But you must take into account that when you change the parameters, then you must apply them to the Palomar: you can do it by clicking on the button UPLOAD and then APPLY.

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APPENDIX A – SIDEREAL TIME

Below is a short article from Wikipedia, preparatory to the topic:

SIDEREAL TIME

From Wikipedia, the free encyclopedia

Astronomers use **sidereal time** as a way to keep track of the direction in which their telescopes need to be pointed to view any given star in the night sky. Just as the Sun and Moon appear to rise in the east and set in the west, so do the stars.

A **sidereal day** is approximately 23 hours, 56 minutes, 4.091 seconds, corresponding to the time it takes for the Earth to complete one rotation relative to the vernal equinox. The vernal equinox itself precesses very slowly in a westwards direction relative to the fixed stars, completing one revolution every 26,000 years approximately. As a consequence, the sidereal day is some 0.008 seconds shorter than the earth's period of rotation relative to the fixed stars (sidereal period of rotation).

The direction from the Earth to the Sun is constantly changing (because the Earth revolves around the Sun once a year), but the directions from the Earth to the distant stars do not change. Therefore the cycle of the apparent motion of the stars around the Earth has a period which is not quite the same as the 24-hour average length of the solar day.

Maps of the stars in the night sky usually make use of declination and right ascension as coordinates. These correspond to latitude and longitude respectively. While declination is measured in degrees, right ascension is measured in units of hours and minutes, because it was most natural to name locations in the sky in connection with the time when they crossed the meridian.

In the sky, the meridian is an imaginary line going from north to south that goes through the point directly overhead, or the zenith. The right ascension of any object currently crossing the meridian is equal to the current local (apparent) sidereal time, ignoring for present purposes that part of the circumpolar region north of the north celestial pole (for an observer in the northern hemisphere) or south of the south celestial pole (for an observer in the southern hemisphere) that is crossing the meridian the other way.

Because the Earth orbits the Sun once a year, the sidereal time at any one place at midnight will be about four minutes later each night, until, after a year has passed, one additional sidereal day has transpired compared to the number of solar days that have gone by.

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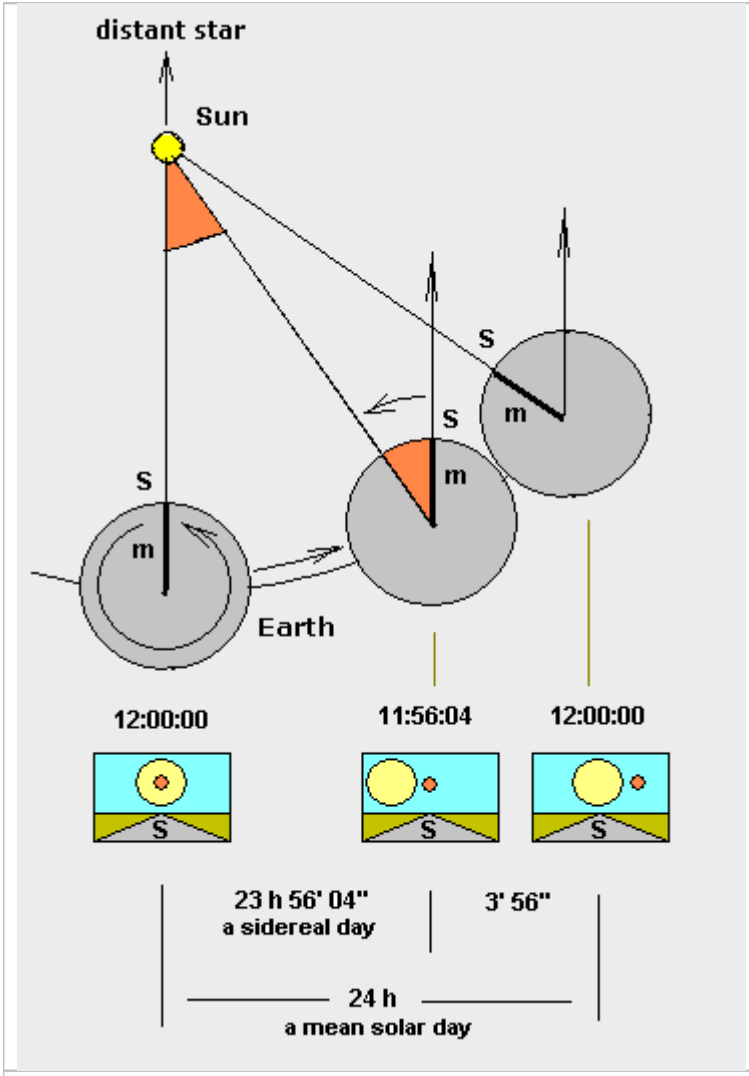
SIDEREAL TIME AND SOLAR TIME

Solar time is measured by the apparent diurnal motion of the sun, and local noon in solar time is defined as the moment when the sun is at its highest point in the sky (exactly due south or north depending on the observer's latitude and the season). The average time taken for the sun to return to its highest point is 24 hours.

During the time needed by the Earth to complete a rotation around its axis (a sidereal day), the Earth moves a short distance (approximately 1°) along its orbit around the sun. Therefore, after a sidereal day, the Earth still needs to rotate a small extra angular distance before the sun reaches its highest point. A solar day is, therefore, nearly 4 minutes longer than a sidereal day.

The stars, however, are so far away that the Earth's movement along its orbit makes a generally negligible difference to their apparent direction (see, however, parallax), and so they return to their highest point in a sidereal day. A sidereal day is almost 4 minutes shorter than a mean solar day.

Another way to see this difference is to notice that, relative to the stars, the Sun appears to move around the Earth once per year. Therefore, there is one less solar day per year than there are sidereal days. This makes a sidereal day approximately $^{365.24}/_{366.24}$ times the length of the 24-hour solar day, giving approximately 23 hours, 56 minutes, 4.1 seconds (86,164.1 seconds).



Sidereal time vs solar time. **Above left**: a distant star (the small red circle) and the Sun are at culmination, on the local meridian. *Centre*: only the distant star is at culmination (a mean sidereal day). *Right*: few minutes later the Sun is on the local meridian again. A solar day is complete.

PRECESSION EFFECTS

The Earth's rotation is not simply a simple rotation around an axis that would always remain parallel to itself. The Earth's rotational axis itself rotates about a second axis, orthogonal to the Earth's orbit, taking about 25,800 years to perform a complete rotation. This phenomenon is called the precession of the equinoxes. Because of this precession, the stars appear to move around the Earth in a manner more complicated than a simple constant rotation.

For this reason, to simplify the description of Earth's orientation in astronomy and geodesy, it is conventional to chart the positions of the stars in the sky according to right ascension and declination, which are based on a frame which itself follows the Earth's precession, and to keep track of Earth's rotation, through sidereal time, relative to this frame as well. In this reference frame, Earth's rotation is close to constant, but the stars appear to rotate slowly with a period of about 25,800 years. It is also in this reference frame that the tropical year, the year related to the Earth's seasons, represents one orbit of the Earth around the sun. The precise definition of a sidereal day is the time taken for one rotation of the Earth in this precessing reference frame.

DEFINITION

Sidereal time, at any moment (and at a given locality defined by its geographical longitude), more precisely Local Apparent Sidereal Time (LAST), is defined as the hour angle of the vernal equinox at that locality: it

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has the same value as the right ascension of any celestial body that is crossing the local meridian at that same moment.

At the moment when the vernal equinox crosses the local meridian, Local Apparent Sidereal Time is 00:00. Greenwich Apparent Sidereal Time (GAST) is the hour angle of the vernal equinox at the prime meridian at Greenwich, England.

Local Sidereal Time at any locality differs from the Greenwich Sidereal Time value of the same moment, by an amount that depends on the longitude of the locality. When one moves eastward 15° in longitude, sidereal time is larger by one hour (note that it wraps around at 24 hours). Unlike computing local solar time, differences in longitude and time are counted here to the accuracy of measurement, not just in whole hours.

Apparent Sidereal Time (Local or at Greenwich) differs from Mean Sidereal Time (for the same locality and moment) by the Equation of the Equinoxes: This is a small difference in Right Ascension R.A. (*dRA*) (parallel to the equator), not exceeding about +/-1.2 seconds of time, and is due to nutation, the complex 'nodding' motion of the earth's polar axis of rotation. It corresponds to the current amount of the nutation in (ecliptic) longitude ($d\psi$) and to the current obliquity (ε) of the ecliptic, so that $dRA = d\psi * cos(\varepsilon)$.

Greenwich Mean Sidereal Time (GMST) and UT1 differ from each other in rate, with the second of sidereal time a little shorter than that of UT1, so that (as at 2000 January 1 noon) 1.002737909350795 second of mean sidereal time was equal to 1 second of Universal Time (UT1). The ratio is almost constant, varying but only very slightly with time, reaching 1.002737909409795 after a century.

To an accuracy which involves a loss of precision of 0.1 second of error after a century, Greenwich (Mean) Sidereal Time (in hours and decimal parts of an hour) can be calculated as

GMST = 18.697374558 + 24.06570982441908 * D ,

where D is the interval, in days including any fraction of a day, since 2000 January 1, at 12h UT (interval counted positive if forwards to a later time than the 2000 reference instant), and the result is freed from any integer multiples of 24 hours to reduce it to a value in the range 0-24.

In other words, Greenwich Mean Sidereal Time exceeds mean solar time at Greenwich by a difference equal to the longitude of the fictitious mean Sun used for defining mean solar time (with longitude converted to time as usual at the rate of 1 hour for 15 degrees), plus or minus an offset of 12 hours (because mean solar time is reckoned from 0h midnight instead of the older pre-1925 astronomical tradition by which 0h used to mean noon).

Sidereal time is used at astronomical observatories because sidereal time makes it very easy to work out which astronomical objects will be observable at a given time. Objects are located in the night sky using right ascension and declination relative to the celestial equator (analogous to longitude and latitude on Earth), and when sidereal time is equal to an object's right ascension, the object will be at its highest point in the sky, or *culmination*, at which time it is usually best placed for observation, as atmospheric extinction is minimised.

Sidereal time is a measure of the position of the Earth in its rotation around its axis, or time measured by the apparent diurnal motion of the vernal equinox, which is very close to, but not identical to, the motion of stars. They differ by the precession of the vernal equinox in right ascension relative to the stars.

Earth's **sidereal day** also differs from its rotation period relative to the background stars by the amount of precession in right ascension during one day (8.4 ms). Its J2000 mean value is $23^h56^m4.090530833^s$. Etymology of sidereal is from Latin "sidereus" from sidus, sider- = star. Therefore, its meaning relates to a measurement of time relative to the position of the stars.

EXACT DURATION AND ITS VARIATION

A mean sidereal day is about 23 h 56 m 4.1 s in length. However, due to variations in the rotation rate of the Earth the rate of an ideal sidereal clock deviates from any simple multiple of a civil clock. In practice, the difference is kept track of by the difference UTC–UT1, which is measured by radio telescopes and kept on file and available to the public at the IERS and at the United States Naval Observatory.

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Given a tropical year of 365.242190402 days from Simon et al. this gives a sidereal day of 86,400 × , or 86,164.09053 seconds.

According to Aoki et al., an accurate value for the sidereal day at the beginning of 2000 is $^{1}/_{1.002737909350795}$ times a mean solar day of 86,400 seconds, which gives 86,164.090530833 seconds. For times within a century of 1984, the ratio only alters in its 11th decimal place. This web-based sidereal time calculator uses a truncated ratio of $^{1}/_{1.00273790935}$.

Because this is the period of rotation in a precessing reference frame, it is not directly related to the mean rotation rate of the Earth in an inertial frame, which is given by $\omega=2\pi/T$ where T is the slightly longer stellar day given by Aoki et al. as 86,164.09890369732 seconds. This can be calculated by noting that ω is the magnitude of the vector sum of the rotations leading to the sidereal day and the precession of that rotation vector. In fact, the period of the Earth's rotation varies on hourly to interannual timescales by around a millisecond, together with a secular increase in length of day of about 2.3 milliseconds per century which mostly results from slowing of the Earth's rotation by tidal friction.

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APPENDIX B – TIME ZONES

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APPENDIX C - REFERENCE STARS

STAR NAME	CONSTELLATION	BAYER	SPECTRUM	MAGNITUDE	DISTANCE	INDEX
"Sirius"	CMa	Alpha	"A1Vm"	-1.46	8.6	0
"Canopus"	Car	Alpha	"F0II"	-0.72	312.6	1
"Arcturus"	Boo	Alpha	"K1.5IIIFe"	-0.04	36.7	2
"Rigil Kentaurus"	Cen	Alpha	"G2V"	-0.01	4.4	3
"Vega"	Lyr	Alpha	"A0Va"	+0.03	25.3	4
"Capella"	Aur	Alpha	"G5IIIe+G0III"	+0.08	42.2	5
"Rigel"	Ori	Beta	"B8Ia"	+0.12	772.5	6
"Procyon"	CMi	Alpha	"F5IV-V"	+0.38	11.4	7
"Achernar"	Eri	Alpha	"B3Vpe"	+0.46	143.7	8
"Betelgeuse"	Ori	Alpha	"M1-2Ia-Iab"	+0.50	427.3	9
"Hadar"	Cen	Beta	"B1III"	+0.61	525	10
"Altair"	Aql	Alpha	"A7V"	+0.77	16.8	11
"Aldebaran"	Tau	Alpha	"K5+III"	+0.85	65.1	12
"Antares"	Sco	Alpha	"M1Ib+B2.5V"	+0.96	603.7	13
"Spica"	Vir	Alpha	"B1III-IV+B2V"	+0.98	262.1	14
"Pollux"	Gem	Beta	"KOIIIb"	+1.14	33.7	15
"Fomalhaut"	PsA	Alpha	"A3V"	+1.16	25.1	16
"Mimosa"	Cru	Beta	"B0.5III"	+1.25	352.4	17
"Deneb"	Cyg	Alpha	"A2Ia"	+1.25	3227.7	18
"Acrux"	Cru	Alpha	"B0.5IV"	+1.33	320.6	19
"Regulus"	Leo	Alpha	"B7V"	+1.35	77.5	20
"Adhara"	CMa	Epsilon	"B2II"	+1.50	430.6	21
"Gacrux"	Cru	Gamma	"M3.5II"	+1.63	87.9	22
"Shaula"	Sco	Lambda	"B2IV+B"	+1.63	702.6	23
"Bellatrix"	Ori	Gamma	"B2III"	+1.64	242.9	24
"El Nath"	Tau	Beta	"B7III"	+1.65	131	25
"Miaplacidus"	Car	Beta	"A2IV"	+1.68	111.1	26
"Alnilan"	Ori	Epsilon	"B0Ia"	+1.70	1341.6	27
"Al Nair"	Gru	Alpha	"B7IV"	+1.74	101.4	28
"Alioth"	UMa	Epsilon	"A0pCr"	+1.77	80.9	29
"Regor"	Vel	Gamma	"WC8+O9I"	+1.78	840.2	30
"Alnitak"	Ori	Zeta	"O9.5Ib"	+1.79	820	31
"Mirfak"	Per	Alpha	"F5Ib"	+1.79	591.7	32
"Dubhe"	UMa	Alpha	"K0IIIa"	+1.79	123.6	33
"Wezen"	CMa	Delta	"F8Ia"	+1.84	1791.2	34
"Kaus Australis"	Sgr	Epsilon	"B9.5III"	+1.85	144.6	35
"Avior"	Car	Epsilon	"K3III+B2:V"	+1.86	631.8	36
"Alkaid"	UMa	Eta	"B3V"	+1.86	100.6	37
"Sargas"	Sco	Theta	"F1II"	+1.87	271.9	38
"Menkalinan"	Aur	Beta	"A2IV"	+1.90	82.1	39
"Atria"	TrA	Alpha	"K2IIb-IIIa"	+1.92	415.3	40
"Alhena"	Gem	Gamma	"A0IV"	+1.93	104.8	41
"Peacock"	Pav	Alpha	"B2IV"	+1.94	183.1	42
"Koo She"	Vel	Delta	"A1V"	+1.96	79.7	43
"Mirzam"	CMa	Beta	"B1II-III"	+1.98	499.2	44
"Castor"	Gem	Alpha	"A1V"	+1.98	51.5	45
"Alphard"	Hya	Alpha	"K3II-III"	+1.98	177.2	46
"Hamal"	Ari	Alpha	"K2-IIICa-1"	+2.00	65.9	47
"Polaris"	UMi	Alpha	"F7:Ib-II"	+2.02	431.2	48
"Diphda"	Cet	Beta	"K0III"	+2.04	95.8	49
"Saiph"	Ori	Kappa	"B0Iab"	+2.05	720	50
"Nunki"	Sgr	Sigma	"B2V"	+2.06	220	51
"Menkent"	Cen	Theta	"K0III"	+2.06	61	52
"Alpheratz"	And	Alpha	"B8IVmnp"	+2.06	97	53
"Mirach"	And	Beta	"M0III"	+2.06	200	54
"Kochab"	UMi	Beta	"K4III"	+2.08	130	55

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"Ras Alhague"	Oph	Alpha	"A5III"	+2.10	47	56
"Algol"	Per	Beta	"B8V"	+2.12	93	57
"Al Dhanab"	Gru	Beta	"M5III"	+2.13	170	58
"Denebola"	Leo	Beta	"A3V"	+2.14	36	59
"Muhlifain"	Cen	Gamma	"A1IV+"	+2.18	130	60
"Naos"	Pup	Zeta	"O5Ia"	+2.21	1400	61
"Suhail"	Vel	Lambda	"K4Ib-II"	+2.23	570	62
"Eltanin"	Dra	Gamma	"K5III"	+2.23	150	63
"Mintaka"	Ori	Delta	"O9.5II+"	+2.23	148	64
"Alphecca"	CrB	Alpha	"A0V"	+2.24	75	65
"Sadr"	Cyg	Gamma	"F8Iab"	+2.24	1500	66
"Schedar"	Cas	Alpha	"K0IIIa"	+2.25	229	67
"Aspidiske"	Car	Iota	"A8Ib"	+2.25	690	68
"Almach A"	And	Gamma	"K3IIb"	+2.26	350	69
"Mizar"	UMa	Zeta	"A2V"	+2.27	78	70
"Caph"	Cas	Beta	"F2III-IV"	+2.27	54	71
"E. Centauri"	Cen	Epsilon	"B1III"	+2.27	380	72
"Algieba"	Leo	Gamma	"K0"	+2.28	130	73
"Men"	Lup	Alpha	"B1.5III"	+2.28	550	74
"Dschubba"	Sco	Delta	"B0.2IVe"	+2.29	400	75
"Wei"	Sco	Epsilon	"K1III"	+2.29	65	76
"Eta Centauri"	Cen	Eta	"B1.5Vne"	+2.32	310	77
"Merak"	UMa	Beta	"A1V"	+2.35	79	78
"Ankaa"	Phe	Alpha	"K0.5IIIb"	+2.37	77	79
"Girtab"	Sco	Kappa	"B1.5III"	+2.38	460	80
"G.Cassiop."	Cas	Gamma	"B0IVpe"	+2.39	610	81
"Izar"	Boo	Epsilon	"A0"	+2.39	210	82
"Enif"	Peg	Epsilon	"K2Ib"	+2.40	670	83
"Aludra"	CMa	Eta	"B5Iab"	+2.40	3200	84
"Avior"	Car	Epsilon	"K3:IIIv+"	+2.40	630	85
"Scheat"	Peg	Beta	"M2.5II-III"	+2.42	200	86
"Phecda"	UMa	Gamma	"A0Ve"	+2.43	84	87
"Sabik"	Oph	Eta	"A2IV-V"	+2.43	84	88
"Alderamin"	Cep	Alpha	"A7IV"	+2.44	49	89
"Markeb"	Vel	Kappa	"B2IV-V"	+2.46	540	90
"Markab"	Peg	Alpha	"B9III"	+2.49	140	91
"Gienah"	Cyg	Epsilon	"K0III"	+2.50	72	92
"Al Nair"	Cen	Zeta	"B2.5IV"	+2.52	390	93
"Menkar"	Cet	Alpha	"M1.5IIIa"	+2.56	220	94
"Zosma"	Leo	Delta	"A4V"	+2.56	58	95
"Han"	Oph	Zeta	"O9V"	+2.58	460	96
"Arneb"	Lep	Alpha	"F0Ib"	+2.60	1300	97
"Ascella"	Sgr	Zeta	"A2.5Va"	+2.60	89	98
"Graffias"	Sco	Beta	"B0.5V"	+2.62	530	99

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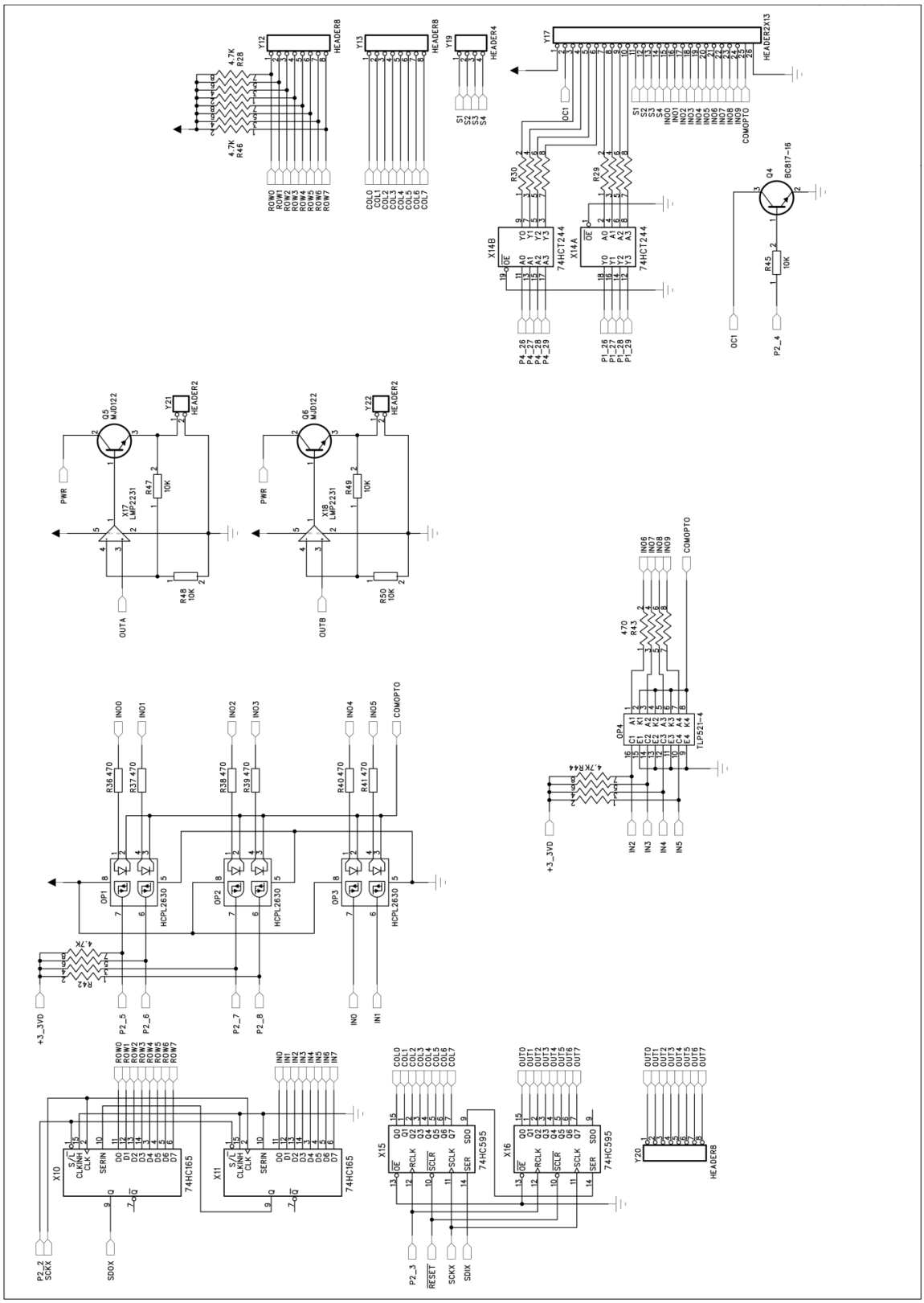
APPENDIX D - I/O ELECTRICAL SCHEME OF PALOMAR



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APPENDIX E – CATALOG OF NGC2000 OBJECTS

NGC 2000.0 is a modern compilation of the New General Catalogue of Nebulae and Clusters of Stars (NGC), the Index Catalogue (IC), and the Second Index Catalogue compiled by J. L. E. Dreyer (1888, 1895, 1908). The new compilation of these classical catalogs is intended to meet the needs of present-day observers by reporting positions at equinox B2000.0 and by incorporating the corrections reported by Dreyer himself and by a host of other astronomers who have worked with the data and compiled lists of errata. The object types given are those known to modern astronomy. The catalog lists object ID, object type, positions in equinox B2000.0, source of modern data (see NGC 2000 paperback copy), constellation, object size, magnitude, and the description of the object as given by Dreyer. The order of the new catalog is strictly by right ascension, the NGC and IC objects being merged into one machine-readable file.

Byte-by-byte Description of file: ngc2000.dat

Bytes	Format	Units	Label	Explanations
1- 5	A5	---	Name	NGC or IC designation (preceded by I)
7- 9	A3	---	Type	*Object classification
11- 12	I2	h	RAh	Right Ascension 2000 (hours)
14- 17	F4.1	min	RAm	Right Ascension 2000 (minutes)
20	A1	---	DE-	Declination 2000 (sign)
21- 22	I2	deg	DEd	Declination 2000 (degrees)
24- 25	I2	arcmin	DEm	Declination 2000 (minutes)
27	A1	---	Source	*Source of entry
30- 32	A3	---	Const	Constellation
33	A1	---	l_size	[<] Limit on Size
34- 38	F5.1	arcmin	size	? Largest dimension
41- 44	F4.1	mag	mag	? Integrated magnitude, visual or photographic (see n_mag)
45	A1	---	n_mag	[p] 'p' if mag is photographic (blue)
47- 96	A50	---	Desc	*Description of the object

Note on Type: the field is coded as follows:

Gx	Galaxy
OC	Open star cluster
Gb	Globular star cluster, usually in the Milky Way Galaxy
Nb	Bright emission or reflection nebula
Pl	Planetary nebula
C+N	Cluster associated with nebulosity
Ast	Asterism or group of a few stars
Kt	Knot or nebulous region in an external galaxy
***	Triple star
D*	Double star
*	Single star
?	Uncertain type or may not exist
blank	Unidentified at the place given, or type unknown
-	Object called nonexistent in the RNGC (Sulentic and Tifft 1973)
PD	Photographic plate defect

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```
I5370   Gx   0 00.1   +32  45  m  And     0.7   15.  p pB,  S,  R,  stell  N
I5371        0 00.2   +32  49  d  And               F,  vS,  *15  att
 7801    -   0 00.4   +50  42  r  Cas               Cl,  pRi,  pC,  st  9...
I5372   Gx   0 00.4   +32  47  m  And     0.7   15.  p F,  vS,  R  N
I5373   Gx   0 00.4   +32  47  m  And     0.7   15.  p pB,  S,  R,  stell  N
 7802   Gx   0 01.1   +06  13  r  Psc           14.  p vF,  S,  R,  psbM
I5374        0 01.1   +04  30  d  Psc               F,  S,  E  ns,  gbM,  r
I5375   Gx   0 01.1   +04  31  m  Psc     0.9   14.  p cF,  E  ns,  gbMN,  r
 7804        0 01.3   +07  45  D  Psc               only  a  F  D*,  not  nebs
 7803   Gx   0 01.4   +13  06  r  Peg           14.  p pF,  pS,  R,  F*  np  vnr
 7805   Gx   0 01.4   +31  26  s  Peg     1.4   14.  p eF,  S,  R,  sbM,  stellar,  sp  of  2
I5376   Gx   0 01.4   +34  32  u  And     2.1   15.  p F,  S,  E  ns,  gbM
 7806   Gx   0 01.5   +31  27  s  Peg     1.3   14.  p eF,  S,  R,  stellar,  nf  of  2
I1526   Gx   0 01.6   +11  21  z  Peg           15.  p F,  S,  bMSN
I5377   Gx   0 02.1   +16  36  u  Peg     1.3   16.  p vF,  S,  R,  dif
 7809   Gx   0 02.2   +02  56  r  Psc           15.  p eF,  vS
 7810   Gx   0 02.4   +12  57  r  Peg           14.  p pF,  stellar,  2  st  np  in  line
I1527        0 02.4   +04  07  d  Psc               F,  R,  r,  vF*  sf
 7811   Gx   0 02.5   +03  20  r  Psc           15.  p vF,  S,  R,  stellar
I5378        0 02.6   +16  37  d  Peg               F,  pS,  E  ns,  *15  inv
I5379        0 02.7   +16  35  d  Peg               F,  S,  lE  pf,  lbM,  *17  close  p
I5380        0 02.7   -66  11  d  Tuc               vlE
 7812   Gx   0 02.9   -34  15  r  Scl               vF,  S,  R,  am  st
 7813   Gx   0 03.2   -11  59  d  Cet           15.  p eF,  vS,  E  160deg  ,  *8.5  p  49s  ,  2  st  9  n  8'
I5381   Gx   0 03.2   +15  58  v  Peg     1.5       pF,  S,  lE  spnf,  bM,  *13  nr
 7814   Gx   0 03.3   +16  09  s  Peg     6.3   10.5  cB,  cL,  E,  vgbM
 7815    -   0 03.4   +20  41  r  Peg               F,  S,  lE,  7817  nf
I5382        0 03.4   -65  11  d  Tuc               alm  R,  lbM
 7808   Gx   0 03.5   -10  45  r  Cet           14.  p eF,  vS,  R,  stell  N,  *8.5  sp  3'
 7822   Nb   0 03.6   +68  37  s  Cep    60.         !  eeF,  eeL
 7816   Gx   0 03.8   +07  28  s  Psc     1.9   14.  p vF,  pL,  R,  gbM
I5383        0 03.8   +16  00  d  Peg               F,  S,  R,  bM
 7817   Gx   0 04.0   +20  45  s  Peg     3.7   12.  p pF,  cL,  mE  45deg  +/-  ,  lbM
 7818   Gx   0 04.2   +07  21  r  Psc           15.  p eeF,  pS,  v  diffic,  sf  7816
I5384   Gx   0 04.2   -11  58  m  Cet     0.8   15.  p eF,  vS,  E  160deg  ;  = 7813?
 7819   Gx   0 04.4   +31  29  s  Peg     2.0   14.  p eF,  L
 7820   Gx   0 04.6   +05  11  r  Psc           14.  p pF,  vS,  vsmbM,  *14  sp
 7823   Gx   0 04.8   -62  04  c  Tuc     1.4       F,  S,  R,  gbM
I1528        0 05.1   -03  07  d  Psc               no  description
 7824   Gx   0 05.2   +06  54  r  Psc           14.  p pF,  S,  R,  *10  np
 7825   Gx   0 05.2   +05  12  r  Psc           15.  p vF,  S,  gbM
 7826    -   0 05.2   -20  44  r  Cet               Cl,  vP,  vlC
I1529        0 05.2   -11  30  d  Cet               F,  S,  R,  biN,  r
 7821   Gx   0 05.3   -16  29  r  Cet           14.  p vF,  pS,  iF,  glbM
 7827   Gx   0 05.5   +05  13  r  Psc           14.  p vF,  S,  R,  *12-13  nf
 7830    *   0 06.2   +08  22  A  Psc               eF,  neb*  13m
 7828   Gx   0 06.4   -13  24  v  Cet               eF,  S,  E  130deg  ,  sbMN,  *15  sf
 7829   Gx   0 06.4   -13  24  v  Cet               only  a  *13  at  100deg  ,  20"  from  7828
I5385        0 06.4   -00  04  d  Psc               eF  (not  verified)
 7833    -   0 06.5   +27  38  r  Peg               Cl,  vS,  vF,  2'.5,  nebs?
I5386        0 06.5   -03  43  x  Psc               pB,  pS,  mE  ;  = 7832
 7832   Gx   0 06.6   -03  42  r  Psc           13.  p vF,  vS,  R,  vgpsmbM,  2  st  9  sf;  = IC  5386
 7834   Gx   0 06.7   +08  21  r  Psc           15.  p eeF,  vS
 7835   Gx   0 06.8   +08  25  r  Psc           15.  p eF,  S,  R
 7837   Gx   0 06.9   +08  20  r  Psc           16.  p eF,  p  of  Dneb
 7838   Gx   0 07.0   +08  20  r  Psc           15.  p eF,  f  of  Dneb
 7839   D*   0 07.0   +27  38  A  Peg               vF,  pS,  dif,  r
 7840   Gx   0 07.1   +08  33  A  Psc               eF,  S
    1   Gx   0 07.3   +27  43  s  Peg     1.9   13.  p F,  S,  R,  bet  *11  and  *14
    2   Gx   0 07.3   +27  41  s  Peg     1.4   15.  p vF,  S,  s  of  1
    3   Gx   0 07.3   +08  17  r  Psc           14.  p F,  vS,  R,  alm  stell
 7831   Gx   0 07.3   +32  35  r  And           14.  p eF,  vS,  mE,  vF*  vnr
I1530   Gx   0 07.3   +32  37  v  And     1.8       vF,  S,  iF,  bM
    4   Gx   0 07.4   +08  22  A  Psc               eF
    5   Gx   0 07.8   +35  21  r  And           14.  p vF,  vS,  N  =  *13,  14
 7836   Gx   0 08.0   +33  04  v  And     1.2       eF,  vS,  R,  bet  2  st
    6    -   0 08.3   +32  30  r  And               eF,  vS,  cE;  =  7831?
    7   Gx   0 08.4   -29  55  v  Scl     2.5       eF,  cL,  mE,  vgvlbM
I   1   D*   0 08.4   +27  43  x  Peg               D*,  13  &  13,  one  nebs
   10   Gx   0 08.6   -33  52  v  Scl     2.7       F,  cL,  vlE,  glbM
   11   Gx   0 08.7   +37  26  r  And           14.  p vF,  vS,  vlE,  2  vF  st  inv
   12   Gx   0 08.7   +04  37  s  Psc     1.9   15.  p eF,  pL,  vglbM
    8   D*   0 08.8   +23  50  A  Peg               vF,  N  in  n  end
   13   Gx   0 08.8   +33  26  s  And     2.7   14.  p vF,  vS,  S  st  +  neb
   14   Gx   0 08.8   +15  49  s  Peg     3.0   12.  p vF,  pS,  R,  glbM
    9   Gx   0 08.9   +23  49  s  Peg     1.5   15.  p F,  R,  *9,  10  sf
   15   Gx   0 09.1   +21  36  r  Peg           15.  p vF,  vS,  R,  bM
   16   Gx   0 09.1   +27  44  s  Peg     2.1   12.0  pB,  S,  R,  bM
   18   D*   0 09.4   +27  43  r  Peg               F,  vS,  iR,  mbM,  16  p  19s
   19    -   0 09.4   +32  50  r  And               eeF,  lE,  3  vF  st  around
   20   Gx   0 09.5   +33  19  s  And     2.0   15.  p F,  *10  att
I1531   Gx   0 09.6   -32  17  c  Scl     1.9       vF,  vS,  R,  D*  n
   22   Gx   0 09.8   +27  50  r  Peg           15.  p vF,  pS,  R,  lbM,  r
   23   Gx   0 09.9   +25  55  s  Peg     2.3   12.0  3  S  st  +  neb
   24   Gx   0 09.9   -24  58  s  Scl     5.5   11.5  vF,  cL,  mE,  gbM
   25   Gx   0 09.9   -57  03  r  Phe               vF,  S,  R
I1532   Gx   0 09.9   -64  22  c  Tuc     1.6       2'  l,  mE,  bM
   28   Gx   0 10.3   -57  01  r  Phe               eF,  p  of  2
   26   Gx   0 10.4   +25  50  s  Peg     2.2   14.  p vF,  pL,  R,  2  F  st  n
   27   Gx   0 10.5   +29  00  r  And           14.  p eF,  vS,  E,  B*  nr
   31   Gx   0 10.5   -57  00  r  Phe               eeF,  S,  R,  f  of  2
I1533        0 10.6   -07  25  d  Cet               eeF,  vS,  R,  v  diffic;  *7.5  n,  *9  s
   21   Gx   0 10.7   +32  59  s  And     1.4   14.  p eF,  S,  lE
   29   Gx   0 10.8   +33  21  s  And     1.8   14.  p pB,  pL,  E  0deg
   30   D*   0 10.8   +21  57  r  Peg               neb  *13
   32   Ast  0 10.9   +18  47  r  Peg               F
   33   D*   0 10.9   +03  40  F  Psc               eF,  vS,  or  neb  st
   17        0 11.0   -12  06  D  Cet               vF,  eS,  iR,  D*  2'  p;  =  34
I   2   Gx   0 11.0   -12  49  x  Cet               F,  S,  bM
   34   Gx   0 11.1   -12  06  r  Cet           13.  p pF,  S,  R,  2  st  nr
   35   Gx   0 11.2   -12  00  r  Cet           14.  p eeF,  pS,  R
   37   Gx   0 11.3   -56  58  r  Phe               eF,  S,  R
   36   Gx   0 11.4   +06  23  s  Psc     2.4   15.  p vF,  pS,  iF
   38   Gx   0 11.9   -05  36  r  Psc           13.  p F,  S,  R,  mbM
I   3   Gx   0 12.1   -00  25  x  Psc               F,  vS,  iF,  r
   39   Gx   0 12.3   +31  03  r  And           14.  p vF,  pS,  R
   41   Gx   0 12.8   +22  02  r  Peg           14.  p pF,  S,  lE,  gbM
   42   Gx   0 12.9   +22  06  r  Peg           15.  p F,  vS,  stell
   40   Pl   0 13.0   +72  32  s  Cep     0.6   11.  p F,  vS,  R,  vsmbM,  *12  sp
   43   Gx   0 13.0   +30  54  r  And           14.  p eF,  *12  np  45"
   44    -   0 13.1   +31  17  r  And               eF,  vS
I   4   Gx   0 13.4   +17  29  x  Peg               vF,  vS,  R
I1534        0 13.8   +48  09  d  And               pF,  vS,  diffic,  *10  nr  nf
   48   Gx   0 14.0   +48  14  s  And     1.7   15.  p eeF,  pL,  R,  v  diffic
I1535        0 14.0   +48  09  d  And               vF,  S,  48  nf  6'
   45   Gx   0 14.1   -23  11  A  Cet     8.1   10.4  eF,  L,  vgvlbM,  *9  cont  s
   46    *   0 14.1   +05  59  r  Psc               nebula
I1536   Gx   0 14.2   +48  08  m  And     0.7   15.  p F,  S,  R
   49   Gx   0 14.3   +48  14  r  And           15.  p eeF,  S,  R,  2nd  of  3
   47   Gx   0 14.5   -07  11  r  Cet           13.  p vF,  vS
   58        0 14.5   -07  10  D  Cet               vF,  pS,  R;  =  47
   51   Gx   0 14.6   +48  15  s  And     1.8   15.  p pF,  pS,  R,  bM
   52   Gx   0 14.6   +18  33  r  Peg           14.  p vF,  S,  E
   50   Gx   0 14.7   -07  20  v  Cet               vF
   53   Gx   0 14.7   -60  20  c  Tuc     2.1       eF,  S,  R,  bM
   55   Gx   0 14.9   -39  11  s  Scl    32.4    8.  p vB,  vL,  vmE,  triN
   54   Gx   0 15.1   -07  08  r  Cet           14.  p vF,  pS,  R,  50  sp
   56    -   0 15.4   +12  26  r  Psc               eF,  eL,  diff
   57   Gx   0 15.4   +17  18  r  Psc           13.  p F,  S,  R,  sbM
   59   Gx   0 15.5   -21  27  r  Cet           13.  p vF,  pS,  iR,  gbM
   60   Gx   0 16.0   -00  18  r  Psc           15.  p eF,  vS,  R,  lbM
I1537        0 16.0   -39  19  d  Phe               eeF,  vL,  vmE;  55  np
   61   Gx   0 16.5   -06  14  r  Psc           15.  p vF,  S,  iR,  psvlbM
   62   Gx   0 17.1   -13  28  r  Cet           14.  p F,  vS,  R,  glbM
I   5   Gx   0 17.4   -09  33  m  Cet     0.8   14.  p F,  neb  *13
   64   Gx   0 17.5   -06  51  r  Cet           14.  p eeF,  vS,  R,  v  diffic
   63   Gx   0 17.7   +11  27  s  Psc     1.9   13.  p pF,  S,  R,  sbM
I1538    ?   0 18.0   +30  04  x  And               eF
   67   Gx   0 18.2   +30  04  s  And     0.4   16.  p eF,  vS,  R
   68   Gx   0 18.3   +30  04  s  And     1.5   13.0  eF,  L,  3  or  4  st  +  neb
   69   Gx   0 18.3   +30  02  v  And     0.4   14.8  eF,  vS,  R
   70   Gx   0 18.4   +30  05  s  And     1.7   15.  p eF,  vS,  R,  bet  2  F  st
   71   Gx   0 18.4   +30  04  s  And     1.8   13.0  eF,  vS,  R
I1539        0 18.4   +30  06  x  And               eF,  bet  2  st  13;  =  70
   72   Gx   0 18.5   +30  02  s  And     1.4   13.4  eF,  vS,  R
   73   Gx   0 18.8   -15  21  r  Cet           13.  p vF,  S,  R,  eF  D*  close  f
   74   Gx   0 18.9   +30  03  r  And           16.  p eF,  S,  E,  last  of  6
I   6   Gx   0 19.0   -03  16  m  Psc     0.5   14.  p F,  vS,  R,  mbM  =  *14
   65   Gx   0 19.1   -22  54  r  Cet           15.  p eF,  vS,  R,  gbM,  p  of  2
I   7        0 19.1   +10  33  d  Psc               F,  vS,  R,  *12.5  close
I   8   Gx   0 19.1   -03  13  m  Psc     0.7   15.  p vF,  vS,  irr  E,  lbM
   66   Gx   0 19.2   -22  57  r  Cet           14.  p eF,  pS,  E  225deg  ,  *9  n  1',  f  of  2
   75   Gx   0 19.5   +06  25  r  Psc           15.  p vF,  vS,  R
   76   Gx   0 19.6   +29  56  r  And           14.  p vF,  S,  bM
I   9   Gx   0 19.7   -14  07  m  Cet     0.4   15.  p vF,  pL,  R
I1540        0 19.8   +23  43  d  And               F,  S,  iF
   77        0 20.0   -22  31  D  Cet               eF,  vS,  iF  (*?),  *9  p  3'
I1541   Gx   0 20.0   +22  01  z  And           15.  p F,  S,  R,  lbM,  r
I   12  Gx   0 20.3   -02  39  m  Psc     0.7   16.  p pF,  S,  E  ns
   78   Gx   0 20.4   +00  49  r  Psc           14.  p vF,  S,  R
I   10  Gx   0 20.4   +59  18  s  Cas     5.1   10.3  F*  inv  in  eF,  vL  neb
I   13  Gx   0 20.4   +07  42  u  Psc     1.6   15.  p vF,  pL,  E  ns,  dif
I   11       0 20.5   +56  36  d  Cas               vF,  L,  triple  *  on  np  corner
I1542   Gx   0 20.6   +22  37  m  And     0.7   15.  p F,  dif,  gbM
I1543   Gx   0 20.9   +21  53  u  And     0.8   14.  p F,  S,  R,  gbMN
   79   Gx   0 21.0   +22  34  r  And           15.  p vF,  S,  vlbM
   80   Gx   0 21.2   +22  21  s  And     2.5   12.1  F,  S,  R,  psbM
   81   Gx   0 21.2   +22  22  r  And               eeF,  sp  83
   87   Gx   0 21.2   -48  38  r  Phe               eF,  S,  R,  gbM,  1st  of  4
   88   Gx   0 21.3   -48  39  r  Phe               eF,  vS,  R,  2nd  of  4
   89   Gx   0 21.3   -48  41  r  Phe               vF,  S,  R,  gbM,  3rd  of  4
I1544        0 21.3   +23  02  d  And               F,  S,  R,  vlbM
I1545        0 21.3   +21  59  d  And               F,  vS,  R,  dif,  vFN
   82   Gx   0 21.4   +22  26  u  And     1.3   14.  p eF,  stellar
   83   Gx   0 21.4   +22  26  s  And     1.6   12.6  E,  biN,  3  B  st  nr
   85   Gx   0 21.4   +22  30  r  And           15.  p eeF,  cL,  R
   84   Gx   0 21.5   +22  36  r  And           17.  p eF,  st  &  neb
   86   Gx   0 21.5   +22  33  r  And           15.  p eF,  vS,  lbM
   92   Gx   0 21.5   -48  38  r  Phe               F,  S,  R,  gbM,  4th  of  4
I1546        0 21.5   +22  30  d  And               vF,  S,  v  diffic
I1547    ?   0 21.6   +22  31  x  And               eF.pS,  sbM  *
   91   Gx   0 21.8   +22  25  s  And     2.5   15.  p vF,  vS,  *13  sp
   90    *   0 21.9   +22  25  r  And               vF,  lE
I1548   Gx   0 21.9   +22  01  z  And           16.  p F,  vS,  R,  stell
   93   Gx   0 22.0   +22  25  r  And           14.  p vF,  vS
   94   Gx   0 22.2   +22  28  r  And           15.  p eF,  vS
   95   Gx   0 22.2   +10  30  s  Psc     1.9   12.6  F,  pL,  R,  gbM
   96   Gx   0 22.3   +22  33  r  And           17.  p vF,  S,  vlbM
   97   Gx   0 22.4   +29  44  r  And           13.  p F,  vS,  R,  gbM
I   14       0 22.6   +10  29  d  Psc               susp  neb
   98   Gx   0 22.8   -45  16  c  Phe     1.8       vF,  pS,  R,  bM,  r
I1549        0 23.2   +06  59  d  Psc               eF,  D*  f  46s
  101   Gx   0 23.9   -32  34  r  Scl           13.  p pB,  pL,  lE,  *14  f
   99   Gx   0 24.0   +15  47  s  Psc     1.7   14.  p vF,  pL,  R,  gbM
  100   Gx   0 24.0   +16  29  v  Psc     5.8       vF,  pS,  mE,  2'  long
  104   Gb   0 24.1   -72  05  s  Tuc    30.9    4.0  glob.  cl.  !!  vB,  vL,  vmCM
  102   Gx   0 24.4   -13  57  r  Cet           14.  p eF,  vS,  R
I1550   Gx   0 24.4   +38  12  m  And     0.6   15.  p R,  stell,  vFN
  106   Gx   0 24.7   -05  10  D  Psc               pF,  vS,  R,  lbM
  103   OC   0 25.3   +61  21  s  Cas     5.      9.8  Cl,  pS,  pC,  st  11...18
  105   Gx   0 25.3   +12  53  s  Psc     1.2   13.2  vF,  S,  R,  vlbM
  107   Gx   0 25.6   -08  17  F  Cet               F,  pL,  *7  sf  5'
  108   Gx   0 25.9   +29  13  r  And           13.  p pF,  pL,  R,  psbM
  109   Gx   0 26.2   +21  49  r  And           15.  p vF,  S,  3  st  nr
  111    -   0 26.7   -02  38  r  Cet               vF,  S,  R,  lbM,  *8.5  p  36s  ,  n  2';  =  113?
  112   Gx   0 26.7   +31  43  r  And           14.  p eF,  vS,  R
  115   Gx   0 26.8   -33  41  r  Scl               vF,  pL,  lE,  D*  2'  np
  121   Gb   0 26.8   -71  32  s  Tuc     1.5   10.6  pB,  pS,  lE,  vgbM
  113   Gx   0 27.0   -02  30  r  Cet           13.  p vF,  S,  sbM
  114   Gx   0 27.1   -01  47  r  Cet           15.  p vF,  S*  in  centre,  p  of  2
  119   Gx   0 27.1   -56  59  r  Phe               pB,  S,  R,  mbM
  116   Gx   0 27.2   -07  42  r  Cet           14.  p vF
  117   Gx   0 27.2   +01  19  r  Cet           15.  p F,  vS
  118   Gx   0 27.3   -01  47  r  Cet           15.  p vF,  S*  in  centre,  f  of  2
  110   OC   0 27.4   +71  23  r  Cas               Cl,  pR,  lC,  st  9...12
  120   Gx   0 27.5   -01  31  s  Cet     1.8   15.  p nebulous  *
I1551   Gx   0 27.6   +08  53  u  Psc     2.7   15.  p F,  vS,  R,  r
  122    ?   0 27.7   -01  38  F  Cet               1st  of  2  vF  neb  4'-5'  np  of  *8.5
  123    ?   0 27.8   -01  36  F  Cet               2nd  of  2  vF  neb  4'-5'  np  of  *8.5
  124   Gx   0 27.9   -01  49  s  Cet     1.6   14.  p vF,  L,  dif,  2  F  st  np
I  16   Gx   0 27.9   -13  05  m  Cet     0.5   15.  p pB,  R,  bM
I  15       0 28.0   -00  04  d  Cet               vF,  vS,  iF,  sbM
I  17   Gx   0 28.5   +02  39  z  Cet           15.  p pB,  vS,  R,  stellar
I  20   Gx   0 28.5   -13  00  m  Cet     0.6   14.  p pB,  R
I  18   Gx   0 28.6   -11  34  m  Cet     0.6   15.  p pF,  S,  iF,  gbM
I  19   Gx   0 28.7   -11  38  m  Cet     0.6   15.  p R,  S,  stellar  =  14m
  125   Gx   0 28.8   +02  50  s  Psc     2.0   12.3  vF,  S,  bM,  D*  sp
  126   Gx   0 29.1   +02  49  s  Psc     1.4   16.  p vF,  S,  lE
  127   Gx   0 29.2   +02  52  s  Psc     1.0   14.0  vF,  vS,  R,  p  128
  128   Gx   0 29.2   +02  51  s  Psc     3.4   11.6  pB,  pS,  lE  2deg  ,  bM
I  21   Gx   0 29.2   -00  10  m  Cet     0.4   14.  p pB,  vs,  iF
  130   Gx   0 29.3   +02  52  v  Psc     0.9   14.3  vF,  vS,  R,  f  128
  131   Gx   0 29.6   -33  16  s  Scl     2.1       F,  pL,  pmE,  vgbM,  p  of  2
I  22   Gx   0 29.6   -09  03  m  Cet     0.6   15.  p F,  S,  lbM,  r
I1552   Gx   0 29.6   +21  29  u  Psc     1.1   15.  p F,  pL,  dif
  129   OC   0 29.9   +60  14  s  Cas    21.      6.5  Cl,  vL,  pR,  lC,  st  9...13
  132   Gx   0 30.2   +02  06  s  Cet     2.0   14.  p pF,  cL,  R,  vglbM,  R
  134   Gx   0 30.4   -33  15  s  Scl     8.1   10.1  vB,  L,  vmE  47deg  ,  psbM,  f  of  2,  *10  np  45"
I  23       0 30.9   -12  44  d  Cet               pB,  S,  R,  bM
  138   Gx   0 31.0   +05  10  r  Psc           15.  p F,  eS,  sbM
  139   Gx   0 31.0   +05  05  r  Psc           15.  p eF,  S
  137   Gx   0 31.1   +10  11  r  Psc           14.  p F,  iF,  lbM
  133   OC   0 31.2   +63  22  s  Cas     7.      9.  p Cl,  pL,  st  10...,  D*  inv
I  24   OC   0 31.2   +30  51  x  And               S,  Cl,  30"-40',  nebs?
I  25   Gx   0 31.2   -00  24  m  Cet     0.8   15.  p F,  vS,  irrR,  vlbM,  r
  140   Gx   0 31.3   +30  47  r  And           14.  p vF,  S,  R,  gbM
  142   Gx   0 31.3   -22  37  r  Cet           14.  p eF,  S,  lE,  1st  of  3  and  faintest
  141   Gx   0 31.4   +05  11  r  Psc           15.  p vF,  vS,  iR
  143   Gx   0 31.4   -22  34  r  Cet           15.  p eF,  S,  mE,  2nd  of  3
  144   Gx   0 31.4   -22  39  r  Cet           14.  p eF,  pS,  R,  3rd  of  3  and  brightest
  136   OC   0 31.5   +61  32  s  Cas     1.          glob.  cl.  ,  vF,  S,  eC
  145   Gx   0 31.7   -05  09  s  Cet     1.8   12.8  F,  pL,  vlE,  vgbM,  *8-9  f  5'
  135        0 31.8   -13  22  D  Cet               vF,  vS,  R
I  26       0 31.8   -13  20  F  Cet               F,  S,  R,  gbM;  =  135
I1553   Gx   0 32.7   -25  35  m  Scl     1.0   14.  p vF,  vmE  10deg
  152   Gb   0 32.8   -73  09  r  Tuc           12.  p vF,  L,  R,  vglbM
  146   OC   0 33.1   +63  18  s  Cas     7.      9.1  Cl,  pL,  lC,  st  11-12,  D*
I  27       0 33.1   -13  22  d  Cet               F,  vS,  lE  pf,  bM
I  28       0 33.1   -13  27  d  Cet               vF,  dif,  vlbM
I1554   Gx   0 33.1   -32  16  c  Scl     1.6       vF,  vS,  eE  170deg  ,  sbM
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  147   Gx   0 33.2   +48  30  s   Cas   12.9     9.3   vF,  vL,  iR,  gsmbM  *11
  149   Gx   0 33.7   +30  43  r   And          15.  p vF,  vS,  R,  gbM  *14,  *12  sp
  151   Gx   0 34.0   -09  42  s   Cet     3.7  11.5   pF,  pL,  lE  90deg  , vglbM
  153        0 34.0   -09  42  D   Cet                 pF,  pS,  R,  * nr nf;  = 151
  154   Gx   0 34.1   -12  39  r   Cet          14.  p eF,  vS,  R
I  29   Gx   0 34.2   -02  11  m   Cet     0.6  15.  p vF,  S,  R,  lbM
  148   Gx   0 34.3   -31  47  s   Scl     2.4  12.1   vB,  S,  lE  90deg  , smbM  *11
  150   Gx   0 34.3   -27  48  s   Scl     4.2  11.1   pF,  pS,  R
I  30   Gx   0 34.3   -02  05  m   Cet     0.4  15.  p vF,  S,  R,  lbM
I  31   Gx   0 34.4   +12  17  u   Psc     1.4  15.  p F,  E pf,  dif
  156   D*   0 34.6   -08  21  F   Cet                 vS,  np  157
  159   Gx   0 34.6   -55  47  r   Phe                 vF,  pS,  R,  glbM,  3 st f
I1555   Gx   0 34.6   -30  01  c   Scl     1.5         eeF,  S,  R,  2 st p in line
  155   Gx   0 34.7   -10  46  r   Cet          13.  p pF,  S,  R
  157   Gx   0 34.8   -08  24  s   Cet     4.3  10.4   pB,  L,  E,  bet  2 cB  st
  158   D*?  0 34.9   -08  19  F   Cet                 vS,  nf  157
I  32   Gx   0 35.0   -02  08  m   Cet     0.4  15.  p vF,  vS,  R,  lbM
I  33   Gx   0 35.1   -02  08  m   Cet     0.5  15.  p vF  vS,  R,  lbM
I1556    ?   0 35.1   -09  34  x   Cet                 eeF,  pS,  R,  v diffic
  167   Gx   0 35.3   -23  22  r   Cet          13.  p vF,  pS,  iR
  161   Gx   0 35.5   -02  50  r   Cet          15.  p eF,  eS,  R,  nearly  bet  2 st;  = IC 1557
I1557   Gx   0 35.5   -02  51  m   Cet     0.6  16.  p eF,  vS,  2 vF st close;  nr  161
I  34   Gx   0 35.6   +09  08  u   Psc     3.4  14.  p vF,  pS,  lE
  166   Gx   0 35.8   -13  37  r   Cet          15.  p eF,  S,  lE,  *11  np
  176   OC   0 35.8   -73  11  r   Tuc          12.  p eF,  S,  vlE,  r,  *8  nr
I1558   Gx   0 35.8   -25  22  c   Scl     3.4         E 160deg  , * n,  perhaps  spir
  163   Gx   0 36.0   -10  07  s   Cet     1.4  12.8   vF,  vS
  160   Gx   0 36.1   +23  57  s   And     3.2  12.4   vF,  vS,  stell,  *8,  17deg  , 4'
  162   Gx   0 36.1   +23  58  r   And                 eF,  stellar,  160  sp
  164   Gx   0 36.5   +02  45  r   Psc          16.  p eF
  165   Gx   0 36.5   -10  06  s   Cet     1.6  13.2   F,  L,  st in centre,  f of  2
  168   Gx   0 36.7   -22  36  r   Cet          14.  p eF,  S,  E 30deg  , *10  nf  3'
  170   Gx   0 36.7   +01  51  r   Cet          15.  p F,  S,  R
  169   Gx   0 36.9   +23  59  s   And     3.0  13.  p F,  pL,  D or biN,  *6  nf  4'
  174   Gx   0 36.9   -29  29  r   Scl          14.  p eF,  S,  vlE,  am  B st
I1559   Gx   0 36.9   +23  59  v   And     0.9         vF,  0'.5  ssf  169
  173   Gx   0 37.2   +01  56  s   Cet     3.5  15.  p vF,  S,  R,  vgbM,  *11  sp  80"
  172   Gx   0 37.3   -22  36  v   Cet     2.6         eF,  S,  E,  *13  close  sp
  171        0 37.4   -19  56  F   Cet                 vF,  pL,  lE,  2 pB  st sf;  = 175
  175   Gx   0 37.4   -19  56  s   Cet     2.6  12.1   pB,  pL,  E,  gbM,  R
  177   Gx   0 37.5   -22  34  r   Cet          13.  p eF,  S,  E 175deg
I  35   Gx   0 37.7   +10  21  u   Psc     1.3  15.  p vF,  S,  dif,  *9.5  nf
I1560        0 37.7   +02  40  d   Cet                 eF;  = 164?
  179   Gx   0 37.8   -17  53  r   Cet          14.  p eF,  eS,  R,  B* np
I  36        0 37.8   -15  26  d   Cet                 F,  vS,  R,  dif
  180   Gx   0 38.0   +08  38  s   Psc     2.6  14.  p vF,  pL,  iR,  * np  inv
  181   Gx   0 38.2   +29  28  r   And          15.  p eF,  eS,  irr,  vF*  att
  182   Gx   0 38.2   +02  44  s   Psc     2.3  12.6   vF,  S,  iR,  vgbM
  183   Gx   0 38.3   +29  30  r   And          14.  p pF,  vS,  R,  gbM
  184   Gx   0 38.5   +29  26  r   And          15.  p eF,  eS
  186   Gx   0 38.5   +03  09  r   Psc          15.  p F,  S,  R,  lbM
I  37   Gx   0 38.5   -15  23  m   Cet     0.7  15.  p eF,  vS,  R,  dif
I1561   Gx   0 38.5   -24  20  m   Cet     1.3  14.  p E 105deg  , * n
I  38   Gx   0 38.6   -15  26  m   Cet     0.6  14.  p F,  S,  R
I1562   Gx   0 38.6   -24  17  c   Cet     2.1         S,  R,  psbM
  190   Gx   0 38.9   +07  02  s   Psc     1.0  14.  p vF,  S,  lE,  sev  st  nr  sp
  185   Gx   0 39.0   +48  20  s   Cas   11.5    9.2   pB,  vL,  iR,  vgmbM,  r
  191   Gx   0 39.0   -09  00  s   Cet     1.5  12.  p pB,  pL,  iE  0deg
I1563   Gx   0 39.0   -09  01  v   Cet     0.6         eF,  stellar,  0'.6  sf  191
  178   Gx   0 39.1   -14  10  s   Cet     2.0  12.6   F,  S,  mE  0deg  , bM;  = IC  39
  209   Gx   0 39.1   -18  38  r   Cet          14.  p vF,  vS,  R,  bM
I  39        0 39.1   -14  10  x   Cet                 pB,  pl,  E ns,  gbM;  = 178
I1564        0 39.2   +05  58  d   Psc                 eF
  192   Gx   0 39.3   +00  51  s   Cet     2.3  14.  p F,  pS,  pmE,  bM
  193   Gx   0 39.3   +03  20  s   Psc     1.7  12.3   F,  L,  p of  2,  *15  close  sp
  194   Gx   0 39.3   +03  02  s   Psc     1.9  12.1   pB,  S,  R,  vgbM
  196   Gx   0 39.3   +00  54  r   Cet          14.  p F,  pS,  R,  psmbM
  197   Gx   0 39.4   +00  53  r   Cet          15.  p eF,  s of  196
  198   Gx   0 39.4   +02  48  s   Psc     1.3  12.8   F,  S,  vgbM
I1565   Gx   0 39.4   +06  43  v   Psc     1.7         F,  S,  R,  gbM
I1566   Gx   0 39.4   +06  48  m   Psc     0.6  15.  p F,  S,  R,  gbM,  r
I  40   Gx   0 39.5   +02  26  u   Cet     1.2  15.  p F,  S,  R,  gbMN  = 13.5
  187   Gx   0 39.6   -14  41  r   Cet          13.  p F,  S,  mE  150deg  , bM
  189   OC   0 39.6   +61  04  s   Cas     4.     8.8   Cl,  pL,  R,  st  11...15
  195   Gx   0 39.6   -09  12  v   Cet     1.3         F
  199   Gx   0 39.6   +03  07  r   Psc          15.  p F,  vS,  *8  p  27s  , 45"  s
  200   Gx   0 39.6   +02  53  s   Psc     2.0  14.  p pB,  S,  vgbM
I1567        0 39.6   +06  37  d   Psc                 neb  *
  201   Gx   0 39.7   +00  51  s   Cet     2.2  15.  p vF,  cL,  E,  vglbM
  202   Gx   0 39.7   +03  31  r   Psc          15.  p eF,  vS,  ibM
  203   Gx   0 39.7   +03  26  r   Psc          15.  p F,  R,  *9  sp  8'
I  41        0 39.7   -14  10  d   Cet                 vF,  S,  dif
  204   Gx   0 39.8   +03  17  r   Psc          14.  p F,  pS,  R,  vgbM,  f of  2
I1568   Gx   0 39.9   +06  50  m   Psc     0.8  15.  p F,  S,  R,  gbM,  r
  207        0 40.0   -14  18  d   Cet                 vF,  S,  lE,  stellar
  212   Gx   0 40.1   -56  10  r   Phe                 vF,  S,  R,  p of  2
  205   Gx   0 40.4   +41  41  s   And   17.4    8.0   vB,  vL,  mE  165deg  , vgvmbM;  = M110
  208   Gx   0 40.4   +02  44  r   Psc          15.  p pF
I1569   Gx   0 40.4   +06  42  m   Psc     0.2  15.  p vF,  vS,  R,  gbM
  220   OC   0 40.5   -73  24  r   Tuc          11.  p F,  iR,  vgbM,  1st  of  several
  206   C+N  0 40.6   +40  44  r   And                 vF,  vL,  mE  0deg
  210   Gx   0 40.6   -13  52  s   Cet     5.4  10.9   B,  pS,  R,  psbM,  r,  *11  p  2'
  222   OC   0 40.6   -73  24  r   Tuc          11.  p vF,  R,  2nd  of  several
I1570        0 40.6   +06  45  d   Psc                 vF,  vS,  R,  vFN
I1571   Gx   0 40.7   -00  19  u   Cet     1.3  15.  p F,  pS,  R,  dif
  215   Gx   0 40.8   -56  13  c   Phe     1.2         F,  S,  R,  am  st,  f of  2
  211    *   0 41.0   +03  26  F   Psc                 eF,  S,  mbNN
  231   OC   0 41.0   -73  22  r   Tuc          12.  p i train  of  st  and  neb
I  42   Gx   0 41.1   -15  26  m   Cet     0.6  15.  p S,  irr,  v  dif
  213   Gx   0 41.2   +16  28  r   Psc          15.  p F,  S,  bet  2 S  st
I1572        0 41.2   +16  16  d   Psc                 eF,  stell,  213  nr
  216   Gx   0 41.4   -21  03  s   Cet     1.8  13.3   eF,  vS,  lE
  214   Gx   0 41.5   +25  30  s   And     2.1  12.2   pF,  pS,  gvlbN,  r
  217   Gx   0 41.5   -10  02  v   Cet     3.3         F,  S,  lE  90deg  , glbM
  218   Gx   0 41.8   +36  21  r   And          15.  p eF,  vS,  R,  gbM
I  44   Gx   0 42.2   +00  51  m   Cet     0.5  14.  p eF,  S,  R,  bet  2 st
I1573        0 42.2   -23  32  d   Cet                 eF,  eS,  mE  60deg
  219   Gx   0 42.3   +00  54  r   Cet          15.  p F,  S,  R,  *11  sp  1'
  230   Gx   0 42.4   -23  38  r   Cet          15.  p eF,  eS,  R,  bMN
I  43   Gx   0 42.4   +29  38  v   And     2.1         vF,  S,  mbM
  227   Gx   0 42.6   -01  32  s   Cet     2.1  13.  p F,  pL,  lbM
  221   Gx   0 42.7   +40  52  s   And     7.6    8.2   !  vvB,  L,  R,  psmbMN;  = M32
  223   Gx   0 42.7   +00  51  r   Cet          14.  p vF,  pS,  R;  = IC  44
  224   Gx   0 42.7   +41  16  s   And   178.     3.5   !!!  eeB,  eL,  vmE  (Andromeda);  = M31
  232   Gx   0 42.7   -23  34  r   Cet          14.  p eF,  S,  R,  bMN
I  45        0 42.7   +29  40  d   And                 susp  neb
  226   Gx   0 42.8   +32  34  r   And          14.  p eF,  S,  R,  *13  s  20"
  228   Gx   0 42.8   +23  30  r   And          15.  p eF,  S,  R,  fainter  of  2
  235   Gx   0 42.8   -23  33  r   Cet          14.  p eF,  S,  R,  bMN
I  47    ?   0 42.9   -13  45  x   Cet                 eF,  eS,  R,  stellar
  229   Gx   0 43.0   +23  29  r   And          14.  p vF,  S,  R,  smaller  of  2
I  46   Gx   0 43.0   +27  15  z   And          15.  p pB,  S,  R,  bM
I1574   Gx   0 43.1   -22  15  c   Cet    2.5          vF,  vmE  0deg  , gbM
  225   OC   0 43.4   +61  47  s   Cas   12.      7.0   Cl,  L,  lC,  st  9...10
  233   Gx   0 43.4   +30  35  r   And          14.  p F,  vS,  R,  lbM
  234   Gx   0 43.4   +14  20  r   Psc          13.  p F,  pS,  ilE,  bM
  238   Gx   0 43.4   -50  11  c   Phe     1.9         eF,  pL,  R,  gvlbM
  241    -   0 43.4   -73  26  r   Tuc                 vF,  R;  = 242?
  236   Gx   0 43.5   +02  56  r   Psc          14.  p vF,  pL
  237   Gx   0 43.5   -00  07  s   Cet     1.8  14.  p vF,  pS,  lE,  lbM
  242   OC   0 43.6   -73  27  r   Tuc          12.  p vF,  S,  biN

I  48        0 43.6   -07  53  d   Cet                 pF,  S  (var  brightness?)
I1575        0 43.6   -04  09  d   Cet                 eF,  S,  R,  *10  s
  188   OC   0 44.     +85  20  s   Cep   14.     8.1   Cl,  vL,  R,  150- 200  st  10...18
I  49   Gx   0 44.0   +01  51  v   Cet     1.9         eeF,  pS,  R,  e diffic
I1576   Gx   0 44.2   -25  06  m   Scl     0.6  15.  p vF,  vS,  cE  135deg  , bet  2 st
I1578   Gx   0 44.5   -25  04  m   Scl     0.6  14.  p vF,  vS,  vmE
  239        0 44.6   -03  47  D   Cet                 pF,  pS,  E 20deg  , bMN,  *8 f  20s
I1577        0 44.6   -08  08  d   Cet                 pB,  S,  R,  gbM  stell  N
  240   Gx   0 45.1   +06  08  r   Psc          15.  p vF,  S,  R,  * nr  s
  248   Nb   0 45.4   -73  23  r   Tuc                 F,  S,  E or  biN,  vglbM
  249   Nb   0 45.4   -73  05  r   Tuc                 F,  pL,  vlE,  r
I1579   Gx   0 45.6   -26  34  m   Scl     0.8  15.  p eF,  eS,  cE  15deg  , gbM
  244   Gx   0 45.8   -15  36  s   Cet     1.3  13.3   vF,  S,  iR,  r,  *10  s  5'
  243   Gx   0 45.9   +29  56  r   And          14.  p F,  vS,  R,  gbM,  *10  p
  256   C+N  0 45.9   -73  30  r   Tuc          12.  p F,  S,  R,  gbM,  *9  nf  40"
  245   Gx   0 46.1   -01  44  s   Cet     1.4  13.  p F,  pS,  iF,  er
I1581        0 46.1   -25  54  d   Scl                 eF,  eS,  E 45deg  , gbM
I  50   Gx   0 46.2   -09  30  m   Cet     0.6  14.  p F,  = neb  *13
I1580        0 46.3   +29  55  d   And                 vF,  v stell
I1582   Gx   0 46.3   -24  18  m   Cet     1.2  15.  p eF,  eS,  E 45deg  , sbM  *
I  51   Gx   0 46.4   -13  26  m   Cet     1.0  13.  p pB,  S,  bM,  r
  261   Nb   0 46.5   -73  07  r   Tuc                 F,  pL,  R,  gbM  *13
  246   Pl   0 47.0   -11  53  s   Cet     3.8    8.  p vF,  L,  4 st  in  dif  neb
  247   Gx   0 47.1   -20  46  s   Cet    20.0    8.9   F,  eL,  vmE  172deg
I1583        0 47.2   +23  05  d   And                 F,  vS,  R,  stell  N
  250   Gx   0 47.3   +07  55  r   Psc          15.  p eF,  vS,  R,  am  3 st
I1585        0 47.3   +23  03  d   And                 F,  vS,  R,  stell  N
I1584   Gx   0 47.4   +27  49  u   And     1.8  15.  p eF,  L,  dif,  r
  254   Gx   0 47.5   -31  25  s   Scl     2.1  11.8   vB,  pS,  lE,  smbM,  *8  nf  5'
  253   Gx   0 47.6   -25  17  s   Scl    25.1    7.1   !!  vvB,  vvL,  vmE  54deg  , gbM
  265   Gb   0 47.6   -73  29  r   Tuc          12.  p F,  pS,  R
  251   Gx   0 47.8   +19  34  r   Psc          14.  p vF,  S,  R,  lbM,  * inv,  2 vS  st f
  255   Gx   0 47.8   -11  28  s   Cet     3.1  11.8   F,  pS,  R,  gbM
I1586   Gx   0 47.9   +22  22  v   And                 F,  vS,  R,  gbM,  r
  252   Gx   0 48.0   +27  38  s   And     1.8  13.  p pB,  S,  R,  pmbM,  r,  **   p
  267   C+N  0 48.0   -73  17  r   Tuc                 Cl,  F,  pL,  st vS
  257   Gx   0 48.1   +08  19  s   Psc     2.1  14.  p pL,  lE,  gbM,  r
  259   Gx   0 48.1   -02  47  v   Cet     3.2         F,  S,  E 135deg  , lbM
  258   Gx   0 48.2   +27  38  r   And          15.  p eF,  S,  vF st  close
  264   Gx   0 48.3   -38  14  c   Scl     0.9         F,  S,  R,  vsvmbM  *13
I  52   Gx   0 48.4   +04  06  u   Psc     1.2  15.  p vF,  vS,  R,  gvlbM
  269   Gb   0 48.5   -73  32  r   Tuc          12.  p vF,  S,  R
  260   Gx   0 48.6   +27  42  s   And     1.0  14.  p eF,  pS,  lE
  262   Gx   0 48.8   +31  57  s   And     1.4  15.  p eF,  vS,  R,  v diffic
I1587   Gx   0 48.8   -23  34  m   Cet     0.8  15.  p eF,  eS,  alm  R
  263   Gx   0 48.9   -13  06  r   Cet          14.  p eF,  vS,  lE  30deg
  266   Gx   0 49.8   +32  16  s   Psc     3.2  13.  p pB,  pS,  lE,  psbM,  r,  *8  sf  4'
  268   Gx   0 50.2   -05  12  s   Cet     1.7  13.  p vF,  pS,  ilE,  r
I  53        0 50.5   +10  37  d   Psc                 eeF,  pS,  R,  others  susp
  270   Gx   0 50.7   -08  39  r   Cet          13.  p pF,  vS,  iR,  pgbM
  271   Gx   0 50.8   -01  53  s   Cet     2.5  13.  p pF,  S,  lE,  psbM,  *8  f  5s
  273   Gx   0 50.8   -06  53  s   Cet     2.6  13.  p vF,  vS
I  54   D*   0 50.8   -02  17  F   Cet                 neb  or  S Cl,  2',  bM
  274   Gx   0 51.0   -07  03  s   Cet     1.7  13.  p pB,  pS,  smbM,  np  of  2
I1588        0 51.0   -23  33  d   Cet                 vF,  vS,  cE  155deg
  275   Gx   0 51.1   -07  04  s   Cet     1.5  12.5   vF,  S,  R,  sf  of  2
  290   OC   0 51.3   -73  09  r   Tuc          12.  p eF
  272   OC   0 51.4   +35  50  r   And                 Cl,  L,  lC
  277   Gx   0 51.5   -08  35  r   Cet          13.  p F,  pS,  *11  np
I  56   Gx   0 51.5   -12  51  v   Cet     1.3         vF,  S,  lbM
I1589        0 51.5   -34  28  d   Scl                 eF,  eS,  R,  like  Dneb
I  55   Gx   0 51.7   +07  43  m   Psc     0.5  14.  p F,  vS,  dif,  *13  close
  276   Gx   0 52.1   -22  41  r   Cet          14.  p eF,  pS,  E 265deg  , *8  nf  is a close  D*
  278   Gx   0 52.1   +47  33  s   Cas     2.2  10.9   cB,  pL,  R,  2 st  10  nr
  294   Nb   0 52.1   -73  21  r   Tuc                 vF,  pL,  R,  vglbM,  r
I1591   Gx   0 52.1   -22  41  c   Cet     1.3         vF,  vS,  cE  95deg  , bM;  = 276
  279   Gx   0 52.3   -02  12  s   Cet     1.8  14.  p vF,  S,  iR,  bM,  stellar
  280   Gx   0 52.5   +24  20  r   And          14.  p eF,  S,  R,  *15  f  30"
  289   Gx   0 52.7   -31  12  s   Scl     3.7  12.  p v8,  L,  pmE,  gbM,  *11  np
  281   C+N  0 52.8   +56  37  s   Cas   35.     7.  p F,  vL,  dif,  S triple  * on  np  edge
  282   Gx   0 52.8   +30  37  r   Psc          14.  p F,  S,  R,  lbM
  288   Gb   0 52.8   -26  35  s   Scl    13.8    8.1   glob.  cl.  , B,  L,  lE,  st  12...16
  292   Gx   0 52.8   -72  50  r   Tuc                 Cl,  F,  eeL,  R,  st  12...18
I1590   OC   0 53.1   +56  35  x   Cas                 Cl,  vL,  st sc;  281  f
  283   Gx   0 53.3   -13  11  r   Cet          14.  p eF,  S,  R,  1st  of  4
I1592   Gx   0 53.5   +05  46  u   Psc     1.1  15.  p eF,  S,  bet  *12  and  *13
I1597   Gx   0 53.5   -58  07  c   Tuc     1.4         eF,  eS,  cE  165deg  , cbM
  284   Gx   0 53.6   -13  09  r   Cet          15.  p eF,  S,  R,  2nd  of  4
  286   Gx   0 53.6   -13  06  r   Cet          14.  p eF,  S,  R,  4th  of  4
  287   Gx   0 53.6   +32  29  r   Psc          15.  p eF,  S,  R;  RA  1mag   greater?
  291   Gx   0 53.6   -08  45  r   Cet          14.  p vF,  vS,  lE,  alm  stellar
  285   Gx   0 53.7   -13  10  r   Cet                 eF,  S,  R,  3rd  of  4
I1594   Gx   0 53.7   -47  39  c   Phe     1.2         eF,  eS,  cE  130deg  , stell  N
I1595   Gx   0 53.8   -45  11  c   Phe     1.2         eF,  S,  mE  10deg  , stell  N
  299   C+N  0 54.0   -72  10  r   Tuc          11.  p pB,  vS,  R,  gvlbR,  r
  293   Gx   0 54.3   -07  14  r   Cet          14.  p vF,  S
I1599   Gx   0 54.5   -23  29  m   Cet     0.8  15.  p vF,  vS,  cE  100deg
I1593        0 54.7   +32  30  d   Psc                 eF,  semi- stellar
I1596   Gx   0 54.7   +21  31  u   Psc     2.5  15.  p F,  S,  E pf,  gbM
I1598   Gx   0 54.7   +05  46  u   Psc     1.3  15.  p neb  *11;  *9  p  10s  ,   4'.5  n
  303   Gx   0 54.8   -16  40  r   Cet                 eF,  vS
I  57   Gx   0 54.8   +11  50  u   Psc     1.1  16.  p F,  vS,  R,  vlbM,  F*  close
  300   Gx   0 54.9   -37  41  s   Scl    20.0    9.  p pB,  vL,  vmiE,  vgpmbM
  306   C+N  0 54.9   -72  13  r   Tuc          12.  p F,  vS
  297   D*?  0 55.0   -07  21  F   Cet                 eF
  298   Gx   0 55.0   -07  21  r   Cet          13.  p pF
I1600   Gx   0 55.0   -23  31  m   Cet     0.7  15.  p vF,  vS,  cE  95deg
I  58   Gx   0 55.1   -13  41  m   Cet     0.6  15.  p F,  vS,  R,  r
  295   Gx   0 55.2   +31  31  r   Psc          13.  p F,  S,  R,  * 10"  n,  296  nf
  296   Gx   0 55.4   +31  40  r   Psc          15.  p F,  lE,  *10  nf  2'
I1601        0 55.6   -24  09  d   Cet                 vF,  vS,  lE  105deg
I1602   Gx   0 55.9   -09  59  m   Cet     0.7  14.  p vF,  S,  nr  309
  305   Ast  0 56.0   +12  06  A   Psc                 Cl,  S,  sc  st
  304   Gx   0 56.1   +24  07  r   And          14.  p pF,  S,  R,  svlbM
I  60   Gx   0 56.1   -13  23  m   Cet     0.6  15.  p F,  vS,  R,  SN
  330   OC   0 56.2   -72  29  s   Tuc     2.     9.6   glob.  cl.  , vB,  S,  lE,  st  13...15
  301   Gx   0 56.3   -10  40  F   Cet                 eF,  S,  iR,  gbM,  *8  p  30s
  312   Gx   0 56.3   -52  47  c   Phe     1.8         F,  S,  R,  *12  f
  302    *   0 56.4   -10  39  F   Cet                 eF,  vS
  308    *   0 56.4   -01  47  A   Cet                 vF,  eS,  1'  sf  307
  307   Gx   0 56.6   -01  46  r   Cet          14.  p pF,  S,  E
  309   Gx   0 56.7   -09  55  s   Cet     3.1  11.8   pB,  pL,  *12- 13  n
  323   Gx   0 56.7   -52  59  c   Phe     1.3         pF,  S,  R,  bM,  p of  2
I  59   Nb   0 56.7   +61  04  s   Cas    10.          pF,  eL!  (nf  gamma  Cas)
  310    *   0 56.9   -01  46  A   Cet                 stellar
  314   Gx   0 56.9   -31  58  c   Scl     1.2         eF,  vS,  R,  pB*  f  2'
  319   Gx   0 57.0   -43  50  c   Phe     1.1         eF,  vS,  R,  lbM
  328   Gx   0 57.0   -52  55  c   Phe     2.8         vF,  lE,  vgbM,  f of  2
I1603   Gx   0 57.0   -45  25  c   Phe     1.3         eF,  eS,  cE  115deg  , cbM
I  61   Gx   0 57.1   +07  31  u   Psc     1.5  15.  p pF,  vS,  R,  vlbM
  322   Gx   0 57.2   -43  44  c   Phe     1.3         vF,  vS,  R,  lbM,  3 st  p
  321   Gx   0 57.4   -05  02  v   Cet                 eF,  vS
  311   Gx   0 57.6   +30  16  r   Psc          14.  p pF,  vS,  R,  gbM
  317   Gx   0 57.6   +43  47  r   And          15.  p eeF,  pS,  lE,  D*  close  f
I1605   Gx   0 57.6   -48  54  c   Phe     1.6         vF,  eS,  R
  339   Gb   0 57.7   -74  29  s   Tuc     2.2  11.9   F,  L,  R,  vgbM
  313   Gx   0 57.8   +30  21  u   Psc     3.6  12.  p vF,  eS,  1'  np  315
  315   Gx   0 57.8   +30  21  s   Psc     3.2  13.  p pB,  pL,  R,  gbM,  *9  nf  3'
  316   Gx   0 57.8   +30  21  u   Psc     3.6  12.  p vF,  eS,  stellar,  1'  f  315
  325   Gx   0 57.9   -05  08  r   Cet          16.  p vF,  vS
  327   Gx   0 57.9   -05  08  s   Cet     1.9  13.  p F,  S,  E
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  329   Gx   0 58.0   -05  04  s   Cet    1.9   13.  p F, E
I1604          0 58.0   -16  15  d   Cet                    pF, vS, *7.5  np,  F* nr sp (= 333?)
  318   Gx   0 58.1   +30  25  r   Psc          15.  p vF, vS, R, bM
  326   Gx   0 58.4   +26  52  s   Psc    1.5   13.2   F, lE, *9- 10 sf
I1606          0 58.4   -12  11  d   Cet                    eF, pS,  nearly  bet *7  p and  *9  nf
  324   Gx   0 58.6   -40  30  r   Phe                    (?), F, S, stellar
  331    ?   0 58.6   -02  43  F   Cet                    eF, vS, R, lbM, *12  nf 3'
I   62   Gx   0 58.7   +11  49  u   Psc    1.0   15.  p vF, pL, dif
  320   Gx   0 58.8   -20  50  r   Cet          15.  p vF, pS, E 160deg  , *10  n
  332   Gx   0 58.8   +07  06  r   Psc          15.  p vF, S, R, sev  st nr  S
  333   Gx   0 58.8   -16  29  r   Cet          16.  p no  description
  334   Gx   0 58.8   -35  08  r   Scl                    vF, S, R, glbM,  2 st 11  s
  336   Gx   0 58.8   -18  46  r   Cet          12.  p vF, vS, R, sbM
I1607   Gx   0 58.9   +00  36  u   Cet    1.1   14.  p vF, pS, R, lbM
  346   C+N  0 59.1   -72  11  s   Tuc   14.    10.3   B, L, viF, mbM  D*,  r
  335   Gx   0 59.3   -18  14  c   Cet    1.2           vF, pS,  E,  bM
I   64   Gx   0 59.4   +27  03  u   Psc    1.3   16.  p F, S, R, gmbN
I1608   Gx   0 59.4   -34  20  c   Scl    1.7           pB, pS, R; 2 st  nf,  2 np
I   63   Nb   0 59.5   +60  49  s   Cas   10.           pF, eL! conn  with  np one
I1611          0 59.7   -72  21  d   Tuc                    vF, bM
  337   Gx   0 59.8   -07  35  s   Cet    2.8   11.6   pF, L, E, glbM,  *10  f 21s
I1609   Gx   0 59.8   -40  20  c   Phe    1.4           vF, vS, R
I1612          1 00.0   -72  23  d   Tuc                    eF, vS
I   67         1 00.3   -06  55  d   Cet                    vF,  suspected
I   68         1 00.4   -06  57  d   Cet                    vF,  suspected
I   66   Gx   1 00.5   +30  48  u   Psc    1.1   15.  p vF, vS, irr
  338   Gx   1 00.6   +30  39  r   Psc          14.  p vF, vS, iF, bM
  340   Gx   1 00.6   -06  53  r   Cet          14.  p vF, S, E
  341   Gx   1 00.8   -09  11  r   Cet          13.  p F, pL, R, lbM,  r
  342   Gx   1 00.8   -06  47  r   Cet          14.  p vF, vS
  343    *   1 00.8   -23  14  r   Cet                    eF, vS, iR, sbMN  (*?)
  348   Gx   1 00.9   -53  15  c   Phe    1.1           eF, S, R
I   65   Gx   1 00.9   +47  41  s   And    4.3   13.  p eF, pL, mE,  B st f & s
I   70         1 01.1   +00  03  d   Cet                    vF, vS, lbM
I   71         1 01.3   -06  47  d   Cet                    vF,  suspected
  345   Gx   1 01.4   -06  54  r   Cet          13.  p vF, vS, gbM
  347   Gx   1 01.4   -06  49  r   Cet          14.  p vF, vS
I   69   Gx   1 01.4   +31  03  z   Psc          15.  p F, iF, lbM
I   72         1 01.5   -06  46  d   Cet                    neb;  *7 sf 2'
  344   Gx   1 01.6   -23  16  c   Cet    0.9           eF, vS, iR, sbMN  (*?)
I1610   Gx   1 01.7   -15  34  m   Cet    1.2   14.  p pF, pS, R, *10  np
  349   Gx   1 01.9   -06  49  r   Cet          13.  p vF, vS
  350   Gx   1 02.0   -06  49  r   Cet          15.  p eF
  351   Gx   1 02.1   -01  55  r   Cet          14.  p eF, pS,  np of 2
  352   Gx   1 02.1   -04  15  s   Cet    2.7   13.  p pF, S, iE, *8 f 97s
  361   Gb   1 02.2   -71  33  s   Tuc    1.5   11.8   vvF, pL, vlE, vgbM
  353   Gx   1 02.6   -01  56  r   Cet          14.  p eF, pS, R, sf of 2
  360   Gx   1 02.9   -65  37  c   Tuc    3.3           eF, vmE 145deg  , vlbM
  355   Gx   1 03.2   -06  20  r   Cet          15.  p eF, vS
  362   Gb   1 03.2   -70  51  s   Tuc   12.9    6.6   glob.  cl.  , vB,  vL,  vC,  vmbM  st 13- 14
  354   Gx   1 03.3   +22  20  s   Psc    0.9   14.  p vF, vS, R, vS* inv,  *14  close  p
  356   Gx   1 03.3   -07  00  r   Cet          13.  p vF, S, iR
  371   OC   1 03.3   -72  05  s   Tuc    8.           Cl, F, L, R, pC, st 14...16
  357   Gx   1 03.4   -06  20  s   Cet    2.6   11.8   F, S, iR, sbM, *14  nf 20"
  376          1 03.9   -72  49  D   Tuc                    only a D*, pos 270deg  , dist 10"
  365   Gx   1 04.1   -35  07  v   Scl                    F, S, R, glbM
I1615   Gx   1 04.1   -51  08  c   Phe    1.2           eF, S, cE 140deg  , cbM
I1617   Gx   1 04.3   -51  02  c   Phe    1.5           eF, S, cE 130deg  , cbM
  359   Gx   1 04.4   -00  45  r   Cet          15.  p eF, vS
  368   Gx   1 04.4   -43  16  r   Phe                    eF, vS, *7- 8 sp 3'
  364   Gx   1 04.6   -00  51  r   Cet          14.  p vF, vS
I1613   Gx   1 04.8   +02  07  s   Cet   12.0    9.3   F, eeL
  367    ?   1 04.9   -12  09  F   Cet                    eF, pS,  E 175deg  , bn,  3 st 12  np
I   73   Gx   1 04.9   +04  46  z   Psc          15.  p vF, pL, dif
I1616   Gx   1 04.9   -27  26  c   Scl    1.7           eF, pS,  3 st in line  nr
  369   Gx   1 05.1   -17  45  c   Cet    1.3           vF, vS, R, gbM
I1614          1 05.1   +33  13  d   Psc                    vF, S, E 120deg  , vlbM,  *15  nr
  358   Ast  1 05.2   +62  02  r   Cas                    Cl, vlRi
  395          1 05.3   -72  00  D   Tuc                    group  of about  10 st,  no  neb
I1624          1 05.3   -72  02  d   Tuc                    vF, S, R
I   74   Gx   1 05.9   +04  05  z   Psc          15.  p vF, S, stellar
I1618   Gx   1 06.0   +32  25  u   Psc    1.2   16.  p vF, S
  363   Gx   1 06.1   -16  34  r   Cet          15.  p eF, eS, R
I1626          1 06.1   -73  17  d   Tuc                    vF, cS, R
  378   Gx   1 06.2   -30  11  r   Scl          14.  p vF, S, R, gbM
  377   ***  1 06.3   -20  03  F   Cet                    vF, vS, mE,  sbMN
  366   OC   1 06.4   +62  14  s   Cas    3.           Cl, S
I1621          1 06.4   -46  43  d   Phe                    eF, eS,  mE  0deg  , cbM
  370    -   1 06.6   +32  25  r   Psc                    vF, *13  s 15",  dif
  372   ***  1 06.7   +32  26  r   Psc                    stellar,  mbM,  r
  373   Gx   1 07.0   +32  18  r   Psc                    vF, vS
  374   Gx   1 07.1   +32  46  r   Psc          14.  p F, S,  bet  2 st  15
  375   Gx   1 07.1   +32  21  s   Psc    1.3   16.  p vF, vS
I1620   Gx   1 07.1   +13  58  u   Psc    1.2   14.  p F, pS,  dif
I   75   Gx   1 07.2   +10  51  u   Psc    1.6   15.  p vF, vS,  dif,  vlbM
  379   Gx   1 07.3   +32  31  s   Psc    1.8   12.6   pF, S, R, bM
  380   Gx   1 07.3   +32  29  s   Psc    1.6   12.5   pF, S, R, sbM
  382   Gx   1 07.4   +32  24  s   Psc    0.4   14.  p vF, S, R, sp of  D neb
  383   Gx   1 07.4   +32  25  s   Psc    2.3   11.9   pF, pL, R, gbM,  nf of  D neb
  384   Gx   1 07.4   +32  18  s   Psc    1.1   13.0   pF, pS, sp of  2
  385   Gx   1 07.4   +32  19  s   Psc    1.5   12.9   pF, pS, R, nf of  2
  406   Gx   1 07.4   -69  53  s   Tuc    3.8   12.  p F, vL, vglbM,  bN with  eE wisps  165deg
I1619   Gx   1 07.4   +33  04  z   Psc          15.  p F, S, R, gbMFN,  bet  2 st 13
  386   Gx   1 07.5   +32  22  v   Psc    0.9   14.1   cF, S, R
  387   Gx   1 07.5   +32  23  r   Psc                    vF, S, R
  391   Gx   1 07.5   +00  56  r   Cet          14.  p F, S, r
I1622          1 07.5   -17  30  d   Cet                    vF, S, R, sp of  2
I1623          1 07.7   -17  28  d   Cet                    B, cS,  lE,  nf of  2
I1625   Gx   1 07.7   -46  54  c   Phe    2.1           eF, vS, R, susp
  388   Gx   1 07.8   +32  19  v   Psc    0.8   14.3   vF, S, R
  411          1 07.9   -71  46  D   Tuc                    cB, S, R, stellar
  396   Gx   1 08.0   +04  32  A   Psc                    eF, S, lE
  390   Gx   1 08.1   +32  27  r   Psc                    vF, vS, stellar
  416   Gb   1 08.1   -72  21  s   Tuc    1.1   11.0   F, pS, R, gbM
I   76   Gx   1 08.2   -04  32  m   Cet    0.7   15.  p F, vS, R, lbM
I1627   Gx   1 08.2   -46  06  c   Phe    2.5           cF, S, eE 135deg  , vmbM
  381   OC   1 08.3   +61  35  s   Cas    6.     9.  p Cl, pC
  405   D*   1 08.3   -46  40  r   Phe                    eS, stellar,  = *7
  419   Gb   1 08.3   -72  53  s   Tuc    2.6   10.0   pB, pL, R, gbM
I1630   Gx   1 08.3   -46  45  c   Phe    1.7           eF, eS,  E 60deg  , susp
  392   Gx   1 08.4   +33  07  r   Psc          14.  p F, vS, R, mbM,  bet  2 st
  394   Gx   1 08.4   +33  08  r   Psc          15.  p F, S, 50° nf 392
  389   Gx   1 08.5   +39  42  r   And          15.  p eF, eS, R, * nr
  397   Gx   1 08.5   +33  06  r   Psc          15.  p eF, S, R, vF* p
  393   Gx   1 08.6   +39  40  r   And          13.  p F, vS, vlE,  gbM,  4 S st  nr
I   77   Gx   1 08.7   -15  25  x   Cet                    vF, S, irr,  bM
  398   Gx   1 08.8   +32  30  r   Psc          15.  p vF, vS,  stellar
I   78   Gx   1 08.8   -15  51  x   Cet                    F, S, lbM, r
I   79   Gx   1 08.8   -15  57  v   Cet    0.7           R, S,  bM N = 14m
I1628   Gx   1 08.8   -28  35  c   Scl    1.4           cB,  pS,  R,  3 st  8 nr
I1631   Gx   1 08.8   -46  29  c   Phe    1.3           eF, S, R,  susp
  422          1 08.9   -71  46  D   Tuc                    only  3 eF st,  close,  in SMC
I   80   Gx   1 08.9   -15  24  x   Cet                    vF, S, R, gbM
  399   Gx   1 09.0   +32  37  r   Psc          14.  p vF, S, R
  400    -   1 09.0   +32  44  r   Psc                    eF, vS,  403  f
  401    -   1 09.1   +32  46  r   Psc                    eF, stellar,  403  f
I   82   Gx   1 09.1   -16  00  x   Cet                    F, S, gbM
  402    -   1 09.2   +32  49  r   Psc                    eF, vS, R, 403  s 3'
  403   Gx   1 09.2   +32  45  s   Psc    2.1   13.  p vF, pS, cE, *11  s 85"
I   81         1 09.2   -01  41  D   Cet                    eF, S, lE, * 1' sff
I1644          1 09.2   -73  12  d   Tuc                    PN , stell
I1641          1 09.3   -71  46  x   Tuc                    eF, eS, R; = 422
  404   Gx   1 09.4   +35  43  s   And    4.4   10.1   pB, cL, R, gbM,  beta  And  sf
I1629   Gx   1 09.4   +02  34  z   Cet          16.  p F, vS, R, stell
  409   Gx   1 09.5   -35  48  c   Scl    1.5           eF, S, R,  vS* nr
  413   Gx   1 09.5   -02  50  r   Cet          16.  p eF, pS, vlE
I1633   Gx   1 09.9   -45  56  c   Phe    3.0           vF, S, R,  vF* f
  415   Gx   1 10.2   -35  29  r   Scl                    vF, S, R, glbM
  412    -   1 10.3   -20  01  r   Cet                    vF, eS, R,  sbMN  (neb?)
I   83   Gx   1 10.5   +01  41  m   Cet    0.5   15.  p F, S, dif,  lbM
  407   Gx   1 10.6   +33  07  s   Psc    2.0   14.  p vF, vS, sp of  2
  418   Gx   1 10.6   -30  13  s   Scl    2.3   13.  p F, pL, R, vglbM,  p of  2
I1632          1 10.7   +17  41  d   Psc                    vF, vS,  dif,  *15  v close
  408   Gx   1 10.9   +33  06  A   Psc                    vF, vS,  410  f 8s
  410   Gx   1 11.0   +33  09  s   Psc    2.6   13.  p pB, pL, nf of  2
I1637   Gx   1 11.0   -30  26  c   Scl    1.8           eF, S, R,  susp
  417   Gx   1 11.1   -18  10  r   Cet          15.  p eF, eS, R
I1634          1 11.1   +17  39  d   Psc                    F, S, R, gbM,  r
I1635          1 11.1   +17  39  d   Psc                    F, S, R, gbM,  r
  414   Gx   1 11.3   +33  06  r   Psc          14.  p vF, S, iR,  mbM,  410  np
  423   Gx   1 11.4   -29  13  r   Scl          14.  p eF, S, E, glbM,  f of  2
  424   Gx   1 11.5   -38  05  c   Scl    2.1           vF, S, R, glbM
I   84   Gx   1 11.5   +01  39  z   Cet          15.  p pB, S, iF, bM
I1636          1 11.6   +33  21  d   Psc                    F, vS, gbMN
  432   Gx   1 11.8   -61  32  c   Tuc    1.5           F, S, R, gbM,  *12  f
I   85         1 11.8   -00  28  d   Cet                    eF, close  to  *8
I1639   Gx   1 11.8   -00  39  s   Cet    0.8   14.  p vS, R, stell
I1649   Gx   1 11.8   -55  51  c   Phe    1.6           eF, cS,  E 140deg  , cbM
I1640   Gx   1 11.9   -00  37  x   Cet          15.  p vS, R,  bMN
I1655   OC   1 11.9   -71  20  x   Tuc                    Cl, C, eF,  vS
  420   Gx   1 12.1   +32  06  r   Psc          13.  p F, pS, R,  bM
  421    -   1 12.1   +32  09  r   Psc                    eF, vS
  434   Gx   1 12.2   -58  15  s   Tuc    1.9   13.  p B, S, R,  psbM
I1643   Gx   1 12.2   -00  24  x   Cet          15.  p F, S, R,  gbM
I1638   Gx   1 12.3   +33  21  m   Psc    0.4   15.  p F, vS, R, gbMN,  r
I1650   Gx   1 12.3   -50  24  c   Phe    1.5           cF, S,  mE  55deg  , cbM
I1642          1 12.4   +15  45  d   Psc                    F, S, R,  lbMN
  427   Gx   1 12.5   -32  03  r   Scl          15.  p 3 vS st with  neby  (?)
I1645          1 12.5   +15  44  d   Psc                    F, S, R,  dif
I1660          1 12.6   -71  45  d   Tuc                    eF, vS, R, stell  N or F* in M
I1662   OC   1 12.6   -73  27  x   Tuc                    vF, eS;  vS Cl?
I1646   Gx   1 12.7   +15  41  m   Psc    0.5   15.  p vF, pS,  dif
  426   Gx   1 12.9   -00  17  r   Cet          14.  p vF, vS, R
  428   Gx   1 12.9   +00  59  s   Cet    4.1   11.4   F, L, R, bM,  er
  440   Gx   1 12.9   -58  17  s   Tuc    1.0           F, vS, R
  425   Gx   1 13.0   +38  48  r   And          13.  p vF, vS, R, lbM,  *11  att
  429   Gx   1 13.0   -00  20  r   Cet          14.  p vF, vS
  430   Gx   1 13.1   -00  15  r   Cet          13.  p F, vS, R,  vsbM  *
I1647   Gx   1 13.2   +38  53  z   And          15.  p vF, S, R,  diffic
  438   Gx   1 13.4   -37  56  r   Scl                    pF, S, R,  glbM
I   86   Gx   1 13.5   -16  14  x   Cet                    F, sbM
I1651          1 13.5   +02  06  d   Cet                    *13  with  neb,  chiefly  nnf
I1648          1 13.7   +33  13  d   Psc                    F, vS, R, N, r
  439   Gx   1 13.8   -31  45  s   Scl          13.  p pB, S, R,  gbM
  435   Gx   1 14.0   +02  04  r   Cet          15.  p eF, S, E
  441   Gx   1 14.0   -31  47  r   Scl          14.  p pF, S, R,  gbM
I1657   Gx   1 14.1   -32  39  c   Scl    2.1           eF, S,  vmE
I1663          1 14.1   -32  39  c   Scl                    eF, mE  350deg  ; = IC 1657
  431   Gx   1 14.2   +33  44  r   And          14.  p F, S,  vsbM
I   87   Gx   1 14.3   +00  46  x   Cet          15.  p F, pS, R,  dif
I1664    ?   1 14.3   -69  48  x   Tuc                    2 F st inv in eeF  neb
  437   Gx   1 14.4   +05  56  r   Psc          14.  p pF, vS, R, F* np
  454   Gx   1 14.4   -55  24  c   Phe    1.9           vF, S, R,  bM
  456   Nb   1 14.4   -73  17  s   Tuc   15.           pF, pL, iR, r,  1st  of  sev
I   88         1 14.5   +00  48  d   Cet                    pF, S, R,  vlbM
  442   Gx   1 14.6   -01  01  s   Cet    1.2   15.  p vF, S, R,  B* sf
  460   C+N  1 14.8   -72  18  r   Tuc                    F, pL, iR, gbM,  r, 2nd  of  sev
  445   Gx   1 14.9   +01  56  r   Cet          15.  p vF, vS
  446   Gx   1 14.9   +04  11  r   Psc          15.  p F, vS, stellar;  = IC 89
  458          1 14.9   -71  33  D   Tuc                    prob  Cl,  eS,  close,  no  neb
I1652   Gx   1 15.0   +31  58  u   Psc    1.4   14.  p F, S, E ns, *12  v close
  443   Gx   1 15.1   +33  23  r   Psc          14.  p F, S, R, *15  p 8s  on parallel
I1653   Gx   1 15.1   +33  23  s   Psc    1.1   13.5   F, vS, R, gbMN,  r
I1654   Gx   1 15.2   +30  12  u   Psc    1.6   14.  p F, S, lE, gblM,  r
  433   OC   1 15.3   +60  08  s   Cas    3.           Cl, S, lC
  448   Gx   1 15.3   -01  37  r   Cet          13.  p pB, vS,  lE
  450   Gx   1 15.5   -00  52  s   Cet    3.2   12.1   vF, L
  465   OC   1 15.5   -73  20  D   Tuc                    many  st,  no neb,  perhaps  Cl
  436   OC   1 15.6   +58  49  s   Cas    6.     8.8   Cl, S, iF, pC
  447   Gx   1 15.6   +33  04  v   Psc    2.6   14.0   F, pL, bM,  *11  nf
I1656          1 15.6   +33  05  x   Psc                    neb,  S* close  sf,  *9 sf 3'; = 447
I1658          1 15.8   +31  05  x   Psc                    vF, pS,  E, N, r; = 444
  444   Gx   1 15.9   +31  05  r   Psc          14.  p vF, mE 135deg  , lbM; = IC 1658
  455   Gx   1 16.0   +05  11  r   Psc          14.  p F, vS,  alm  stell
  449   Gx   1 16.1   +33  05  v   Psc    0.7   14.3   vF, vS, R, vlbM,  vF st inv
I   89   Gx   1 16.1   +04  18  v   Psc    2.3           F, S,  iF, N = 13m;  462  f; = 446?
I1659   Gx   1 16.1   +30  21  u   Psc    1.6   15.  p F, S, R, N, r
  451   Gx   1 16.2   +33  04  r   Psc          15.  p vF, vS, R, vlbM;  = IC 1661
I1661          1 16.2   +33  05  x   Psc                    eF, S, R;  = 451
  452   Gx   1 16.3   +31  02  r   Psc          14.  p vF, E, *9 np, S* nf,  vnr
  453   ***  1 16.3   +33  05  A   Psc                    vF, vS, R, vF st inv
I   90   Gx   1 16.5   -07  58  m   Cet    0.5   14.  p B, vS,  sbMN
  466   Gx   1 17.2   -58  55  c   Tuc    2.1           vF, pS, R,  gbM
  461   Gx   1 17.3   -33  50  c   Scl    1.2           pB, R, glbM
I1667          1 17.6   -17  07  d   Cet                    eF, pS, R
I1665          1 17.7   +34  42  d   And                    F, vS, R, like  2 or 3 F st in neb
  459   Gx   1 18.0   +17  33  r   Psc          15.  p eF
  462   Gx   1 18.1   +04  14  r   Psc                    eF, vS,  stellar
I1666          1 18.5   +32  28  d   Psc                    F, pS,  dif,  *13  att
I   91         1 18.7   +02  33  d   Cet                    F, S, r, N = 14m
I1668   Gx   1 18.8   +33  11  z   Psc          16.  p eF, vS, R, vFN
  463   Gx   1 18.9   +16  19  r   Psc          15.  p eF, vS, R,  lbM
  464   Gx   1 19.0   +34  58  r   And                    S
I   93   Gx   1 19.0   -17  04  m   Cet    1.2   14.  p vF, pS,  lE,  *8 f 14s  , 1' n
I1674          1 19.0   -50  39  d   Phe                    eF, eS,  bM,  2 spir  wisps
  457   OC   1 19.1   +58  20  s   Cas   13.     6.4   Cl, B, L, pRi,  st 7, 8, 10
  467   Gx   1 19.2   +03  18  s   Psc    2.4   11.9   pB, pL, R,  gbM
I1670          1 19.2   -16  51  d   Cet                    vF, pS,  lE,  2 st  nr  nf
I   95         1 19.3   -12  34  d   Cet                    F, vS,  dif,  vlbM
  469   Gx   1 19.4   +14  53  r   Psc          15.  p eF, S, R
  484   Gx   1 19.6   -58  31  c   Tuc    2.2           vB, S,  lE,  psmbM
I1671          1 19.6   -17  06  d   Cet                    eF, vS, R,  *7 nf 47s
  470   Gx   1 19.7   +03  25  s   Psc    3.0   11.9   pB, L, iR
  468   Gx   1 19.8   +32  47  r   Psc          15.  p vF, eS,  stellar
  471   Gx   1 19.9   +14  47  r   Psc          14.  p neb  *12
  473   Gx   1 19.9   +16  33  s   Psc    2.2   13.  p eF, S
I   92   Gx   1 19.9   +32  46  m   Psc    0.7   15.  p eeF (different  from  468?)
  475   Gx   1 20.0   +14  51  r   Psc                    eF, S
I   97         1 20.0   +14  51  d   Psc                    stellar  = 13.5m
  474   Gx   1 20.1   +03  25  s   Psc    7.9   11.1   pB, S,  smbM,  f of  2
I   94         1 20.1   +32  42  d   Psc                    neb  *13
I1669   Gx   1 20.1   +33  12  z   Psc          16.  p vF, S,  dif
  476   Gx   1 20.2   +16  01  r   Psc          15.  p eF, vS,  stellar
  478   Gx   1 20.2   -22  22  r   Cet          15.  p eF, eS, R,  sbMN
  482   Gx   1 20.3   -40  57  r   Phe                    eF, lE
I   96         1 20.3   +29  40  d   Psc                    pB, pS,  vmbMN  = 12m
  472   Gx   1 20.5   +32  43  r   Psc          14.  p eF, vS, *9- 10  p 14s  , v diff
I1672   Gx   1 20.7   +29  42  u   Psc    1.8   14.  p pB, S, R,  gbMN,  r
I1673          1 20.8   +33  01  d   Psc                    F, R,  stell  N
  480          1 20.9   -09  52  F   Cet                    eF, vS, R  (neb?);  = 481?
  481   Gx   1 21.0   -09  12  r   Cet          14.  p vF, vS, R,  F* np
I   98   Gx   1 21.0   -12  37  m   Cet    0.6   15.  p vF, vS, iF,  bM
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I1675   Gx   1 21.0   +34  16  u   And    0.8   14.  p F, S
I1676   Gx   1 21.0   +30  16  z   Psc          16.  p F, vS, stell  N
I1678   Gx   1 21.0   +05  34  z   Psc          15.  p F, vS, R, stell
I1677   Gx   1 21.2   +33  14  m   Psc    0.9   15.  p F, pS, R, bMN
  477   Gx   1 21.3   +40  29  r   And          14.  p vF,  pS,  vlE,  vglbM
  479   Gx   1 21.3   +03  52  r   Psc          15.  p eF,  S,  R
  485   Gx   1 21.4   +07  01  s   Psc    1.9   14.  p cF,  pL,  R,  *8 sp  3'.5
  491   Gx   1 21.4   -34  03  s   Scl    1.5   13.  p B,  S,  vlE,  bM,  vS*  nr
I1681   Gx   1 21.4   +00  05  x   Cet          15.  p F, S, R, gbM,  r
  487   Gx   1 21.8   -16  21  r   Cet          14.  p eF,  vS,  R
  488   Gx   1 21.8   +05  15  s   Psc    5.2   10.3   pB,  L,  R,  svnbM,  *8  f  10'
  489   Gx   1 21.8   +09  12  r   Psc          13.  p pB,  S,  E
I1679   Gx   1 21.8   +33  28  m   Psc    0.5   15.  p F, S,  iF,  vlbM,  dif
I1680   Gx   1 21.9   +33  18  m   Psc    0.6   15.  p F, vS,  bMN
  483   Gx   1 22.0   +33  32  r   Psc          14.  p vF,  vS
  486   Gx   1 22.1   +05  24  r   Psc          15.  p eF,  eS,  stell,  5'  n  of  488
  490   Gx   1 22.1   +05  22  r   Psc          15.  p vF,  vS,  R,  8'  nf  488
  492   Gx   1 22.2   +05  25  r   Psc          15.  p eF,  vS,  R
  493   Gx   1 22.2   +00  57  s   Cet    3.8   12.5   vF,  L,  mE  60deg  ,  lbM
I1682       1 22.2   +33  13  d   Psc               F,  vS,  R,  stell
  497   Gx   1 22.4   -00  53  s   Cet    2.4   14.  p eF,  pS,  R,  vlbM,  r
I  99   Gx   1 22.5   -12  57  m   Cet    0.5   15.  p vF,  S,  lbM
I1683   Gx   1 22.6   +34  27  u   And    1.7   14.  p F, S,  E ns,  gbM,  r
  500   Gx   1 22.7   +05  24  r   Psc          15.  p vF,  vS,  mbM,  *11  nf  1'
  502   Gx   1 22.8   +09  03  r   Psc          14.  p cB,  S,  R,  bMN
  495   Gx   1 22.9   +33  28  s   Psc    1.5   13.2   vF,  S,  1st  of  3
  505   Gx   1 22.9   +09  28  r   Psc          15.  p vF,  vS,  stellar
I 100       1 22.9   -04  39  d   Cet               F,  vS,  R,  N = 12.5m
I1684       1 22.9   +33  23  d   Psc               F,  S,  R,  dif
  494   Gx   1 23.0   +33  11  r   Psc          14.  p vF,  pL,  E,  3  F  st  s
I1685   Gx   1 23.0   +33  11  m   Psc    1.9   13.  p F,  S,  R,  vlbM,  dif
  499   Gx   1 23.2   +33  28  s   Psc    2.0   12.0   pB,  pL,  R,  3rd  of  3;  = IC  1686
I1686       1 23.2   +33  26  x   Psc               pB,  pS,  lE  pf,  gbMN;  = 499
  496   Gx   1 23.3   +33  33  r   Psc          14.  p vF,  vS,  2nd  of  3
  498   Gx   1 23.3   +33  30  r   Psc          16.  p eeF,  np  499
  501   Gx   1 23.4   +33  27  r   Psc          15.  p vF,  S
  509   Gx   1 23.4   +09  26  s   Psc    1.7   15.  p vF,  S,  E
I1687   Gx   1 23.4   +33  17  m   Psc    0.4   16.  p F, vS,  R,  bMN
I1688       1 23.4   +33  04  d   Psc               F,  vS,  R,  bMN
  503   Gx   1 23.5   +33  21  r   Psc          15.  p eF,  eS,  D*  4'  sp
  504   Gx   1 23.5   +33  13  r   Psc          14.  p vF,  S
  511   Gx   1 23.5   +11  17  r   Psc          15.  p eF,  vS,  S*  inv,  S*  att
  506    -   1 23.6   +33  14  r   Psc               vF,  vS,  sp  507;  = 504?
  507   Gx   1 23.7   +33  15  s   Psc    4.3   11.2   vF,  pL,  R,  bM,  s  of  2
  508   Gx   1 23.7   +33  17  s   Psc    1.6   12.8   vF,  S,  n  of  2
  510   Gx   1 23.7   +33  26  r   Psc               vF,  vS,  lE
  513   Gx   1 23.8   +33  49  r   And          13.  p F, S,  stellar
I1689   Gx   1 23.8   +33  04  m   Psc    0.7   15.  p F, vS,  R,  gbMN,  *14  close
I1690   Gx   1 23.8   +33  10  z   Psc          15.  p F, vS,  R,  stell
  526   Gx   1 23.9   -35  03  r   Scl               F,  S,  E,  p  of  2
  512   Gx   1 24.0   +33  55  r   And          14.  p vF,  vS
  527   Gx   1 24.0   -35  06  r   Scl               F,  S,  lE,  bM,  f  of  2
I1693   Gx   1 24.0   -01  39  x   Cet               eF,  vS,  possibly  F*
  514   Gx   1 24.1   +12  55  s   Psc    3.5   11.9   F,  L,  lE,  vglbM,  **   f
  516   Gx   1 24.1   +09  33  s   Psc    1.6   14.  p eF,  S,  v  diffic,  524  f  41s
I 101   Gx   1 24.1   +09  56  u   Psc    1.6   15.  p vF,  pL,  E,  dif
  518   Gx   1 24.3   +09  20  s   Psc    1.9   14.  p F, vS,  R
I 102   Gx   1 24.4   +09  54  u   Psc    1.0   16.  p eF,  S,  dif
  519   Gx   1 24.5   -01  38  v   Cet               eeF,  vS,  R,  v  diffic
I1691       1 24.5   +33  23  d   Psc               pF,  vS,  R,  dif
  515   Gx   1 24.6   +33  29  r   Psc          14.  p pF,  vS,  R,  np  of  2
  520   Gx   1 24.6   +03  48  s   Psc    4.8   11.2   F,  cL,  E  137deg
  521   Gx   1 24.6   +01  44  s   Cet    3.4   13.  p F,  pL,  R,  gbM
  534   Gx   1 24.6   -38  07  r   Scl               eeF,  S,  R,  vgbM,  1st  of  4
I 103   Gx   1 24.6   +02  02  u   Cet    1.4   15.  p F,  vS,  R
I 104   D*   1 24.6   -01  27  x   Cet               stellar  13m
I1692   Gx   1 24.6   +33  15  z   Psc          16.  p F,  vS,  R,  gbM,  r
  517   Gx   1 24.7   +33  27  r   Psc          13.  p pF,  R,  stellar,  sf  of  2
  530   Gx   1 24.7   -01  35  A   Cet    1.9   14.  p eF,  S,  mE,  F*  sf;  = IC  106
I 105   Gx   1 24.7   +02  05  z   Cet          16.  p F,  eS,  R,  lbM
I 106       1 24.7   -01  35  x   Cet               vF,  S,  dif,  lbM;  = 530
I 108   Gx   1 24.7   -12  38  m   Cet    0.8   15.  p F,  pL,  E  ns
  522   Gx   1 24.8   +10  00  s   Psc    2.8   14.  p eF,  pL,  iF;  Cl  +  neb?
  524   Gx   1 24.8   +09  32  s   Psc    3.2   10.6   vB,  pL,  mbM,  4  S  st  nr
  525   Gx   1 24.8   +09  42  r   Psc          14.  p vF,  vS,  *11-  12  p  5s
I1694   Gx   1 24.8   +01  36  z   Cet          15.  p vF,  S,  mbM
I1696   Gx   1 24.9   -01  37  v   Cet    1.4         eF,  eS,  530  np
I1708       1 24.9   -71  11  d   Hyi               vF,  vS,  R,  *9  sf  4'
I1695       1 25.0   +08  44  d   Psc               eF,  pS,  R,  *10  att  p
  544   Gx   1 25.1   -38  05  r   Scl               eeF,  S,  R,  vgbM,  2nd  of  4
  546   Gx   1 25.1   -38  03  r   Scl               eeF,  S,  R,  vgbM,  3rd  of  4
I1697   Gx   1 25.1   +00  27  x   Cet          15.  p F,  vS,  R,  gbM
I 107   Gx   1 25.2   +14  53  u   Psc    1.2   15.  p vF,  vS,  R,  *  close  p
I 109   Gx   1 25.2   +02  04  u   Cet    1.3   15.  p pB,  vS,  R
  523   Gx   1 25.3   +34  02  s   And    3.1   14.  p Dneb,  vF,  vS,  pos  90deg  ,  dist  30"
  532   Gx   1 25.3   +09  16  s   Psc    2.8   14.  p vF,  pL,  E  30deg  ,  bM
  539   Gx   1 25.3   -18  09  s   Cet    1.8   14.  p vF,  vS,  R
  538   Gx   1 25.4   -01  33  s   Cet    1.3   15.  p eF,  S,  mE,  F*  n
I1698       1 25.4   +14  51  d   Psc               pB,  S,  iF,  bMN
I1699       1 25.4   +14  57  d   Psc               vF,  vS,  R,  gbM
  528   Gx   1 25.5   +33  41  r   And          13.  p F,  pL,  R,  lbM
  533   Gx   1 25.5   +01  46  s   Cet    3.7   13.  p pB,  pL,  R,  gbM
  535   Gx   1 25.5   -01  25  s   Cet    1.3   15.  p vF,  vS,  1st  of  3
  549   Gx   1 25.5   -38  16  c   Scl    2.0         eeF,  S,  R,  vgbM,  4th  of  4
I1700       1 25.5   +14  52  d   Psc               pB,  S,  R,  gbMN
  529   Gx   1 25.7   +34  44  r   And          13.  p pB,  vS,  sbM,  p  of  2
  541   Gx   1 25.7   -01  23  s   Cet    2.7   12.0   F,  S,  R,  bM
  543   Gx   1 25.8   -01  18  s   Cet    0.7   13.3   eF,  eS
I1701   Gx   1 25.8   +18  11  u   Psc    1.6   15.  p F,  S,  dif,  N  13m
I 110       1 25.9   +33  30  d   Psc               vF
I1702   Gx   1 25.9   +16  36  u   Psc    1.5   14.  p eeF,  pS,  lE,  v  diffic,  bet  2  st  ns
  545   Gx   1 26.0   -01  20  s   Cet    3.0   14.  p stellar,  p  of  Dneb
  547   Gx   1 26.0   -01  21  s   Cet    1.7   12.3   stellar,  f  of  Dneb
  548   Gx   1 26.0   -01  14  v   Cet    1.5         eF,  eS
I 111       1 26.0   +33  29  d   Psc               *13  with  neb
I 112   Gx   1 26.0   +11  27  u   Psc    0.9   14.  p F,  S,  dif,  E  pf
  531   Gx   1 26.3   +34  45  r   And          15.  p F,  S,  R
  537    -   1 26.3   +34  05  r   And               stellar;  = 523?
I 114   Gx   1 26.3   +09  56  u   Psc    1.6   16.  p eF,  vS,  R
  536   Gx   1 26.4   +34  43  s   And    3.7   13.  p pB,  pL,  gbM,  f  of  2
I 113       1 26.4   +19  12  d   Psc               vF,  3'  nf  of  *5
I1703   Gx   1 26.4   -01  38  v   Cet    2.3         eF,  S,  dif
  542   Gx   1 26.5   +34  41  r   And          15.  p eF,  diffic
  557   Gx   1 26.5   -01  38  F   Cet          15.  p eF,  S,  R,  *10  nf;  = IC  1703
  550   Gx   1 26.7   +02  01  s   Cet    1.7   14.  p F,  S,  E  90deg  ,  bM,  r
I1705       1 26.7   -03  30  d   Cet               neb  *12,  FD*  nf  2'
I 116       1 26.8   -04  59  d   Cet               F,  S,  R,  lbM
  567   Gx   1 26.9   -10  15  r   Cet          14.  p eF,  vS,  R
I 115   Gx   1 26.9   +19  13  v   Psc    0.6   14.2   vF,  *6  3'.5  npp
I1704       1 26.9   +14  43  d   Psc               pB,  pS,  dif,  iF,  gvlbM
  540   Gx   1 27.1   -20  02  c   Cet    1.4         vF,  vS,  R,  sbMN
  563   Gx   1 27.1   -18  38  r   Cet          14.  p vF,  pS,  lE,  bMN,  sev  F  st  nr
  554   Gx   1 27.2   -22  43  r   Cet          15.  p eF,  vS,  E,  1st  of  3,  *11  f
  555   Gx   1 27.2   -22  45  r   Cet          15.  p eF,  S,  iR,  2nd  of  3
  556       1 27.2   -22  42  D   Cet               eF,  vS,  R,  3rd  of  3
I1706   Gx   1 27.2   +14  47  v   Psc    1.4         F,  S,  dif,  vlbM
  558   Gx   1 27.3   -01  58  v   Cet    0.7         eF,  S,  E,  *10  p;  = IC  117
  560   Gx   1 27.4   -01  55  s   Cet    2.3   12.9   vF,  vS,  iE,  p  of  2
I 117    *   1 27.4   -01  52  x   Cet               pF,  S,  dif,  560  sf
  551   Gx   1 27.6   +37  11  r   And          13.  p vF,  S,  E,  vglbM,  *13  nr
I 118       1 27.6   -05  00  d   Cet               vF,  vS,  R,  lbM
  552    -   1 27.8   +33  28  r   Psc               vS,  stellar,  p  of  2;  RA?
  553    -   1 27.8   +33  28  r   Psc               vS,  stellar,  f  of  2;  RA?
  564   Gx   1 27.8   -01  53  s   Cet    1.8   12.5   vF,  vS,  iF,  f  of  2
  568   Gx   1 27.9   -35  43  r   Scl               vF,  S,  R
I 119   Gx   1 27.9   -02  03  v   Cet    1.6         F,  E  pf,  dif,  564  n
I1709   Gx   1 27.9   -35  43  c   Scl    2.7         eF,  pS,  R,  v  diffic;  = 568
  561   Gx   1 28.2   +34  19  r   And          14.  p eF,  pL,  R
  565   Gx   1 28.2   -01  18  s   Cet    1.6   15.  p S,  E  (biN?)
I 120   Gx   1 28.2   -01  55  v   Cet               F,  S,  dif
I 122       1 28.2   -14  50  d   Cet               pB,  S,  bM
  562   Gx   1 28.4   +48  23  s   And    1.5   15.  p eF,  pS,  R,  D*  nr  s
I 121   Gx   1 28.4   +02  31  u   Cet    1.2   14.  p F,  S,  R,  gbM
  572   Gx   1 28.6   -39  18  r   Scl               eF,  S,  att  to  S*,  B*  nr
I 123   Gx   1 28.8   +02  27  m   Cet    0.4   15.  p F,  S,  R,  sbM
I1707       1 28.8   +33  36  d   Psc               eF,  dif,  *13.3  close
  576   Gx   1 28.9   -51  36  c   Phe    1.2         F,  S,  R,  bM,  am  st  11
  566   Gx   1 29.0   +32  21  r   Psc          14.  p vF,  S,  R
  570   Gx   1 29.0   -00  57  s   Cet    2.5   14.  p vF,  pL,  R,  mbMN
  574   Gx   1 29.0   -35  35  r   Scl               vS,  D*  pos  225deg    inv
  569   Gx   1 29.1   +11  09  r   Psc          14.  p eF,  vS,  R
I 124    *   1 29.2   -01  56  x   Cet               vF,  vS,  dif
I 125   Gx   1 29.3   -13  18  m   Cet    0.4   15.  p vF,  vS,  R,  lbM
  559   OC   1 29.5   +63  18  s   Cas    4.     9.5   Cl,  B,  pL,  pRi
  602  C+N   1 29.6   -73  33  r   Hyi               B,  S,  R,  psbM*,  r
  583   Gx   1 29.7   -18  19  r   Cet          15.  p eF,  S,  R
I 126   Gx   1 29.8   -01  59  x   Cet          16.  p eF,  stellar,  557  f
I 127   Gx   1 29.8   -06  59  v   Cet    2.1         F,  pS,  dif,  *11.5  close
  571   Gx   1 29.9   +32  31  r   Psc          15.  p vF,  pS,  *13-  14  sp
  578   Gx   1 30.5   -22  40  s   Cet    4.8   10.9   B,  L,  pmE,  gpmbM
  577   Gx   1 30.7   -01  59  r   Cet          14.  p F
  580       1 30.7   -02  00  D   Cet               pF,  pS,  R;  = 577
  575   Gx   1 30.8   +21  26  r   Psc          14.  p eF,  pL,  iR;  = IC  1710
I1710       1 30.8   +21  26  x   Psc               F,  pL,  dif,  *13.5  att;  = 575
  573   Gx   1 30.9   +41  16  r   And          13.  p vF,  vS,  R,  gbM
I1711   Gx   1 30.9   +17  11  u   Psc    2.7   15.  p F,  pL,  E  260deg  ,  gbM
  584   Gx   1 31.3   -06  52  s   Cet    3.8   10.4   vB,  pL,  R,  mbM,  p  of  2;  = IC  1712
I 128   Gx   1 31.3   -12  38  m   Cet    0.8   14.  p F,  R,  S,  N
I1712       1 31.4   -06  52  x   Cet               no  descr;  = 584
I 130       1 31.5   -15  35  d   Cet               vF,  S,  dif
  586   Gx   1 31.6   -06  54  s   Cet    1.6   13.2   vF,  vS,  R
I 129   Gx   1 31.6   -12  41  m   Cet    1.0   14.  p F,  pL,  R,  dif
  579   Gx   1 31.7   +33  38  r   Tri          13.  p vF,  pL,  gbM
  585   Gx   1 31.7   -00  55  r   Cet          14.  p vF,  S,  R,  bM
  582   Gx   1 31.9   +33  30  r   Tri          13.  p vF,  pL,  pmE,  *12  p
  597   Gx   1 32.2   -33  29  r   Scl               F,  S,  R,  bM
  593   Gx   1 32.3   -12  21  r   Cet          14.  p vS  Cl,  lE,  nebulous
  587   Gx   1 32.5   +35  22  r   Tri          13.  p vvF,  S,  S  Cl?
I1717       1 32.5   -67  32  d   Hyi               eF,  eS,  mE  25deg  ,  stell  N
  589   Gx   1 32.6   -12  02  r   Cet          14.  p vF,  S,  R,  gbMN,  *10  sp  2'
  588   Kt   1 32.7   +30  40  r   Tri               F,  p  of  2
I1713   Gx   1 32.7   +35  20  m   Tri    2.2   13.  p *13,  nebs  ?
  599   Gx   1 32.8   -12  11  r   Cet          13.  p F,  S,  iF,  er
I 141   Gx   1 32.8   -14  49  m   Cet    1.0   14.  p pB,  S,  R,  N  11.5  excentr
  596   Gx   1 32.9   -07  02  s   Cet    3.5   10.9   pB,  R,  bM,  R,  *6  f  12'
I1714       1 32.9   -13  30  d   Cet               eeF,  S,  lE,  v  dif,  *8  n
  594   Gx   1 33.0   -16  32  r   Cet          14.  p F,  pS,  E,  glbM
I 138   Gx   1 33.0   -00  42  u   Cet    1.4   15.  p no  description
  600   Gx   1 33.1   -07  19  s   Cet    3.5   12.4   eeF
  581   OC   1 33.2   +60  42  s   Cas    6.     7.4   Cl,  pL,  B,  R,  Ri,  st  10...11;  = M103
  592   Kt   1 33.2   +30  39  r   Tri               F,  pL,  f  of  2
I 131   Nb   1 33.2   +30  45  x   Tri               vF,  close  to  *13.5
I 135   Nb   1 33.2   +30  28  x   Tri               vF
I 136   Nb   1 33.2   +30  30  x   Tri               eF,  diffic,  *10  np  3'
  601    -   1 33.3   -12  12  r   Cet               vF,  vS,  R,  4'  sf  599
I 132   Nb   1 33.3   +30  57  x   Tri               vF,  D*  (13,  13)  close
I 133   Nb   1 33.3   +30  53  x   Tri               vF,  S,  vlb  south,  dif
I 134    *   1 33.4   +30  53  x   Tri               vF,  susp,  *9  n  3'
  591   Gx   1 33.5   +35  41  r   And          14.  p eF,  pS,  R,  lbM,  B*  sf
  595   Kt   1 33.5   +30  42  r   Tri               vF,  S,  R,  inv  in  M33
I1716    *   1 33.5   -12  19  F   Cet               eF,  r,  neb?
  590   Gx   1 33.6   +44  56  r   And          14.  p F,  vS,  rr?
I 137   Nb   1 33.6   +30  31  x   Tri               vF,  pL,  dif
I1715   Gx   1 33.6   +12  34  u   Psc    0.8   14.  p F,  S,  R,  N,  r
I 139    *   1 33.7   +30  28  x   Tri               vF,  v  dif,  vlbM
I 140    *   1 33.7   +30  29  x   Tri               vF,  dif
  598   Gx   1 33.9   +30  39  s   Tri   62.     5.7   !  eB,  eL,  R,  vgbMN;  = M33
  617   Gx   1 33.9   -09  47  r   Cet          15.  p eF,  S,  lE
I 142   Nb   1 33.9   +30  45  x   Tri               vF,  stellar,  or  *13  inv
  612   Gx   1 34.0   -36  30  s   Scl          13.2   F,  vS,  R,  *12  p
I 143   Nb   1 34.1   +30  47  x   Tri               vF,  S,  dif,  *13  f  0'.6
  607       1 34.3   -07  25  D   Cet               *11,  *14  close  s
  610    -   1 34.3   -20  09  r   Cet               eF,  vS,  R,  vgbM,  *10  p  2'
  611    -   1 34.3   -20  08  r   Cet               eF,  vS  (F*?),  30"  nf  610
  613   Gx   1 34.3   -29  25  s   Scl    5.8   10.0   vB,  vL,  vmE  118deg  ,  sbM,  *10  nf
  603  ***   1 34.4   +30  11  A   Tri               only  an  eF!?
  604   Kt   1 34.5   +30  48  r   Tri               B,  vS,  R,  vvlbM
  619   Gx   1 34.8   -36  28  r   Scl               eeF,  vS,  R,  p  of  2
  606   Gx   1 34.9   +21  26  r   Psc          14.  p eF,  pS,  R,  vlbM,  r?
  623   Gx   1 35.0   -36  29  r   Scl               F,  S,  R,  f  of  2
  605   Gx   1 35.1   +41  16  r   And          14.  p vF,  vS,  R,  bM
  615   Gx   1 35.1   -07  20  s   Cet    4.0   11.5   pB,  pL,  ilE,  gbM,  r,  *8  np  10'
  625   Gx   1 35.1   -41  26  s   Phe    3.0   12.  p B,  L,  mE,  gpmbM
  643   Gb   1 35.1   -75  33  A   Hyi          13.  p vF,  pS,  R,  vglbM
  626   Gx   1 35.2   -39  08  r   Scl               pF,  S,  R,  bM
  608   Gx   1 35.4   +33  41  r   Tri          14.  p vF,  psbM,  stellar
  630   Gx   1 35.6   -39  21  r   Scl               pF,  S,  R,  bM
  624   Gx   1 35.7   -10  00  r   Cet          14.  p eF,  S,  am  vS  st
  614   Gx   1 35.8   +33  42  r   Tri          14.  p pF,  psbM,  stellar
  616   D*   1 36.0   +33  46  r   Tri               neb  D*,  *8  np
  622   Gx   1 36.0   +00  40  s   Cet    2.0   14.  p eF,  pL,  dif
  618       1 36.3   +33  24  D   Tri               nonexistent
  633   Gx   1 36.4   -37  18  r   Scl               pB,  S,  R,  gbM,  **   np
  621   Gx   1 36.7   +35  32  r   Tri          14.  p vF,  eS,  R,  bMN
  628   Gx   1 36.7   +15  47  s   Psc   10.2     9.2   glob.  cl.  ,  F,  vL,  R,  vg,  psmbM,  rr;  = M74
  631   Gx   1 36.8   +05  51  r   Psc          15.  p vF,  S,  gbM
  620   Gx   1 37.0   +42  20  r   And          14.  p eF,  vS,  R,  lbM
  627       1 37.1   +33  35  D   Tri               nonexistent
  609   OC   1 37.2   +64  33  s   Cas    3.     11.0   Cl,  S,  pRi,  st  14...
  632   Gx   1 37.3   +05  53  r   Psc          13.  p pB,  S,  R,  psbM
  646   Gx   1 37.4   -64  55  s   Hyi               vF,  iR,  vglbM
I1719   Gx   1 37.6   -33  55  c   Scl    2.1         vF,  S,  R,  cF,  *  nr  nf
I 144   Gx   1 37.7   -13  19  m   Cet    0.6   15.  p eF,  eS,  stellar
  634   Gx   1 38.2   +35  23  r   Tri          14.  p eF,  eS,  sev  F  st  inv
  635    -   1 38.3   -19  56  r   Cet               eF,  vS,  R
I1718       1 38.4   +33  21  d   Tri               F,  pS,  pR,  *13.5  att
  641   Gx   1 38.7   -42  31  r   Phe               F,  S,  R,  gpmbM,  p  of  2
  648   Gx   1 38.7   -17  50  r   Cet          14.  p vF,  vS,  vlE,  sbMN
I 145   Gx   1 38.7   +00  44  m   Cet    0.6   15.  p F,  S,  dif
I 146   Gx   1 38.7   -17  50  c   Cet    1.4         F,  vS,  R,  lbM;  = 648
  639   Gx   1 38.9   -29  55  r   Scl          15.  p vF,  vS,  p  of  2
  644   Gx   1 38.9   -42  35  r   Phe               F,  S,  vlE,  glbM,  f  of  2
  642   Gx   1 39.0   -29  54  r   Scl          14.  p vF,  pS,  R,  gbM,  *  f  nr,  f  of  2
  636   Gx   1 39.1   -07  31  s   Cet    2.3   11.3   pB,  vS,  R,  mbM,  r
  640   Gx   1 39.3   -09  23  r   Cet          15.  p eF,  S,  lE  170deg  ,  lbMN,  *10  s  4'
  638   Gx   1 39.6   +07  14  r   Psc          14.  p vF,  pS,  R
  647   Gx   1 39.8   -09  13  r   Cet          14.  p eF,  pS,  lE  160deg  ,  bMN,  *8  f  16s
  649   Gx   1 40.0   -09  14  r   Cet          15.  p eF,  S,  E  0deg  ,  bM  D*?
I 147   Gx   1 40.0   -14  52  m   Cet    0.8   14.  p F,  vS,  R,  vF*  close
  645   Gx   1 40.2   +05  44  r   Psc          14.  p F,  pL,  mE
  629    -   1 40.3   +72  53  r   Cas               iF,  3  st  +  neb
I1720   Gx   1 40.4   -28  55  c   Scl    1.3         eF,  eS,  R,  B,  *  p
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   652   Gx   1 40.7   +07  59  r   Psc          14.  p eeF,  pS,  R,  v diffic
I1721    Gx   1 41.4   +08  30  u   Psc    1.2   14.  p pB,  pS,  E pf,  gbM,  r
 2573    Gx   1 42.    -89  20  c   Oct    3.6   13.5  F,  S,  R,  glbN,  Polarissima  Australis
   655   Gx   1 42.0   -13  04  r   Cet          14.  p eF,  eS,  gbMN
   658   Gx   1 42.2   +12  35  s   Psc    3.2   14.  p pF,  pS,  mE,  mbM
   650   Pl   1 42.3   +51  34  s   Per    4.8   12.  p vB,  p of Dneb;  = M76
   651   Pl   1 42.3   +51  35  d   Per          12.  p vB,  f of Dneb;  = M76
   653   Gx   1 42.4   +35  39  r   And          14.  p vF,  pL,  mE,  lbM,  sev  st  inv
   656   Gx   1 42.4   +26  09  r   Psc          13.  p F,  vS,  R,  r?
I 148        1 42.4   +13  39  d   Psc               eeF,  pS,  v diffic,  660  sf
I 149    Gx   1 42.4   -16  18  m   Cet    1.0   14.  p F,  pS,  E pf,  lbM
   637   OC   1 42.9   +64  00  s   Cas    4.     8.2   Cl,  pS,  B & vF  st
   660   Gx   1 43.0   +13  38  s   Psc    9.1   10.8   pB,  pL,  E,  bM,  r
I 150    Gx   1 43.0   +04  12  u   Psc    1.0   15.  p F,  S,  R,  dif,  *10.5  near,  664  f
I1722    Gx   1 43.0   -34  11  c   Scl    1.8         F,  S,  cE  45deg
I1723    Gx   1 43.2   +08  53  v   Psc    3.5         F,  pL,  E  200deg  ,  glbM
I1724    Gx   1 43.2   -34  15  c   Scl    1.6         F,  S,  cE  175deg
   657   OC   1 43.7   +55  53  r   Cas               Cl,  pRi,  st  12
   664   Gx   1 43.8   +04  14  s   Psc    1.8   14.  p vF,  S,  R
I 151        1 44.0   +13  12  d   Psc               eF,  pS,  np  of  2
   654   OC   1 44.1   +61  53  s   Cas    5.     6.5   Cl,  iF,  Ri,  one  *6- 7,  st  11...14
I 152        1 44.1   +13  02  d   Psc               eF,  S,  R,  vF*  close,  sf  of  2
   659   OC   1 44.2   +60  42  s   Cas    5.     7.9   Cl,  lRi,  st  B
   661   Gx   1 44.2   +28  42  s   Tri    2.2   13.  p F,  S,  R,  bM,  r
   662   Gx   1 44.5   +37  41  s   And    1.0   14.3   F,  S,  R,  mbM
I 153        1 44.6   +12  38  d   Psc               eF,  pS,  R,  sp  of  2
   665   Gx   1 44.8   +10  26  r   Psc          13.  p F,  S,  lE,  bM,  r
   667   Gx   1 45.1   -22  56  r   Cet               eF,  S,  R,  *10  np  100"
I1725        1 45.2   +21  47  d   Psc               F,  S,  pR,  dif
I 154    Gx   1 45.3   +10  39  u   Psc    1.3   15.  p F,  vS,  lbM,  *11.5  sp
I1726    Gx   1 45.3   +04  37  z   Psc          15.  p F,  vS,  gbM,  *13.5  close
I 156    Gx   1 45.5   +10  33  u   Psc    1.8   15.  p pB,  S,  R,  mbMN  = *12
I 157        1 45.7   +12  52  d   Psc               eeF,  S,  R,  D*  p,  nf  of  2
I 158        1 45.9   -06  56  d   Cet               vF,  vS,  R,  mbM
   663   OC   1 46.0   +61  15  s   Cas   16.     7.1   Cl,  B,  L,  eRi,  st  pL
   666   Gx   1 46.0   +34  23  r   Tri          13.  p vF*  in  eF,  eS  neby
   668   Gx   1 46.3   +36  27  s   And    2.3   14.  p pF,  pS,  R,  gbM
I 160    Gx   1 46.4   -13  15  m   Cet    0.8   14.  p F,  stellar,  13m
I 159    Gx   1 46.5   -08  39  m   Cet    0.6   16.  p pB,  S,  R,  mbM
   671   Gx   1 46.9   +13  06  r   Ari          14.  p eF,  pS,  R,  bet  D*  &  *
   669   Gx   1 47.2   +35  33  s   Tri    3.4   13.  p pF,  pL,  mE,  gbM
   670   Gx   1 47.4   +27  53  s   Tri    2.5   12.1   F,  S,  lE
I 155        1 47.5   +59  47  d   Cas               vF,  eL,  dif
I1727    Gx   1 47.5   +27  20  s   Tri    6.2   11.6   F,  L,  st  inv,  672  nf
I1728    Gx   1 47.7   -33  36  c   For    1.4         F,  S,  E  160deg  ,  mbM
   685   Gx   1 47.8   -52  47  s   Eri    4.1   12.  p F,  vL,  R,  vgvlbM
   690   Gx   1 47.8   -16  43  r   Cet          14.  p vF,  vS,  R,  lbM
   672   Gx   1 47.9   +27  26  s   Tri    6.6   10.8   F,  pL,  mE  80deg
I1729    Gx   1 47.9   -26  53  c   For    1.9         pB,  eS,  alm  stell,  rr?
   673   Gx   1 48.4   +11  32  s   Ari    2.4   13.  p pF,  pL,  E,  lbM,  *11  nf  3'
   692   Gx   1 48.7   -48  39  c   Phe    2.4         B,  S,  R,  gbM
I 161        1 48.7   +10  22  d   Psc               eeF,  vS,  R
I 162    Gx   1 48.9   +10  31  u   Psc    1.9   15.  p eeF,  S,  lE
   675   Gx   1 49.0   +13  02  r   Ari          15.  p vF,  S,  R,  lbM,  sp  of  2
   676   Gx   1 49.0   +05  54  s   Psc    4.3   11.  p vF,  E  161deg  ,  sbM  *9
   682   Gx   1 49.0   -14  59  r   Cet          13.  p cF,  S,  R,  gvlbM
   686   Gx   1 49.0   -23  48  r   For          13.  p vF,  vS,  R,  gbM,  er,  2  st  nr
   677   Gx   1 49.1   +13  02  r   Ari          14.  p eeF,  S,  R,  nf  of  2
I 164        1 49.1   -03  55  D   Cet               pF,  S,  R,  bet  2  st  (S  Cl?)
   674    -   1 49.2   +22  20  r   Ari               pB,  vmE,  *14  f  8s  ;  = 697?
   681   Gx   1 49.2   -10  26  s   Cet    2.8   11.8   pF,  cL,  R,  glbM,  S*  p  90"
I 163    Gx   1 49.3   +20  42  t   Ari    1.8   14.  p F,  pS,  R,  bM
I1734    Gx   1 49.3   -32  45  c   For    1.5         vF,  pS,  lE  100deg  ,  bM
   678   Gx   1 49.4   +22  00  s   Ari    5.0   13.  p pB,  S,  iR,  mbM,  p  of  2
   696   Gx   1 49.4   -34  55  r   For               F,  S,  R
   683   Gx   1 49.6   +11  41  r   Ari          15.  p eF,  2  st  14  p  90"
   698   Gx   1 49.6   -34  50  r   For               eF,  S
   679   Gx   1 49.7   +35  47  s   And    2.3   12.4   F,  stellar
   680   Gx   1 49.8   +21  58  s   Ari    2.9   13.  p pB,  S,  iR,  mbM,  f  of  2
   689   Gx   1 49.9   -27  28  r   For          15.  p vF,  pL,  R,  gbM
I1730    Gx   1 50.0   +21  58  m   Ari    0.6   15.  p F,  S,  R,  gbM
   684   Gx   1 50.2   +27  39  s   Tri    3.9   13.  p F,  vlE,  *13  f  100";  = IC  165
I 165     ?   1 50.2   +27  38  x   Tri               eF,  S,  lE,  vF*  close  f;  = 684
I1731    Gx   1 50.2   +27  12  v   Tri    1.7         F,  E  npsf,  bM,  prob  spir
I1739        1 50.4   -34  03  d   For               cF,  cS,  R,  mbM
   693   Gx   1 50.5   +06  09  s   Psc    2.7   14.  p pF,  S,  E  90deg  ,  vglbM,  *10  nf
I 168        1 50.5   -08  32  d   Cet               vF,  stellar,  *10  f  4'  (707  f  1mag  )
   687   Gx   1 50.6   +36  21  r   And          13.  p vF,  stellar
   699   Gx   1 50.6   -12  03  r   Cet          14.  p eF,  pS,  E  105deg  ,  bnp,  curved
I 169        1 50.6   -12  41  d   Cet               F,  S,  E  pf,  bM,  r
   691   Gx   1 50.7   +21  46  s   Ari    3.5   12.  p F,  cL,  vglbM
I1733        1 50.7   +33  06  d   Tri               F,  vS,  pR,  r
   688   Gx   1 50.8   +35  16  r   Tri          13.  p vF,  vS,  r?
I1732    Gx   1 50.8   +35  55  u   And    1.7   15.  p vF,  pS,  mbM;  eF  st  inv?
I1735        1 50.9   +33  06  d   Tri               vF,  vS,  R
I1736    Gx   1 50.9   +18  18  u   Ari    1.4   15.  p F,  pS,  E  210deg  ,  glbM
   694   Gx   1 51.0   +22  00  s   Ari    0.8   14.  p F,  S,  R,  bet  2  st  15
   701   Gx   1 51.1   -09  42  s   Cet    2.5   12.2   F,  pL,  E,  vgvlbM,  r
I 167    Gx   1 51.1   +21  55  v   Ari    3.0         eF,  *10.5  n  4'
I1738    Gx   1 51.1   -09  47  v   Cet    1.2         eF,  vS,  701  p
   695   Gx   1 51.2   +22  35  s   Ari    0.7   14.  p vS,  stellar
   707   Gx   1 51.2   -08  30  r   Cet          14.  p vF,  F*  in  centre
   697   Gx   1 51.3   +22  21  s   Ari    4.7   13.  p F,  cL,  E,  mbM
   702   Gx   1 51.3   -04  03  s   Cet    1.5   14.  p eF,  vlE  0deg  ,  *13  s  90"
I1740        1 51.3   -29  57  d   For               pB,  eS,  lE,  like  D*
I1737        1 51.7   +36  15  d   And               eF,  3  or  4  vF  st  in  neb
   706   Gx   1 51.8   +06  18  s   Psc    2.2   13.  p F,  S,  bM,  *13  n  1'
I1741    Gx   1 51.9   -16  47  m   Cet    0.7   14.  p eF,  eS;  = 690?
I 170        1 52.0   -08  32  d   Cet               F,  vS,  R,  stellar
   700   Gx   1 52.2   +36  04  r   And          15.  p eF,  vS,  R,  sp  703
   711   Gx   1 52.5   +17  30  r   Ari          14.  p vF*  in  vF,  vS  neby
I 166    OC   1 52.5   +61  50  s   Cas    5.    11.7   S  Cl,  nebulous?
   725   Gx   1 52.6   -16  31  r   Cet          14.  p vF,  vS,  R
   704   Gx   1 52.7   +36  06  r   And          14.  p vF,  vS,  R,  2nd  of  4
   703   Gx   1 52.8   +36  09  s   And    1.5   15.  p vF,  vS,  R,  1st  of  4
   705   Gx   1 52.8   +36  08  r   And          14.  p vF,  vS,  R,  3rd  of  4
   708   Gx   1 52.8   +36  10  s   And    3.3   15.  p F,  pL,  bM,  4th  of  4
   709   Gx   1 52.9   +36  13  r   And          15.  p vF,  pS,  bet  2  st,  group  sp
   716   Gx   1 52.9   +12  32  A   Ari               eF,  S,  R,  B*  f
I1743    Gx   1 52.9   +12  43  v   Ari    2.1         vF,  pS,  lbM,  dif;  = 716?
   710   Gx   1 53.0   +36  02  r   And          14.  p vF,  pS,  2  st  s
   720   Gx   1 53.0   -13  44  s   Cet    4.4   10.2   cB,  pL,  lE,  psmbM
I1745        1 53.0   -16  40  d   Cet               eF,  eS
   712   Gx   1 53.2   +36  48  r   And          14.  p vF,  R,  am  pB  st
   715          1 53.2   -12  50  D   Cet               eF,  S,  gbMN
   718   Gx   1 53.2   +04  12  s   Psc    2.8   11.7   pB,  S,  iR,  psmbM
I1742    Gx   1 53.2   +22  43  m   Ari    0.7   15.  p F,  S,  lE  pf,  glbM
   714   Gx   1 53.6   +36  12  r   And          14.  p F,  vS,  R,  2  st  13  p  and  np
I1744    Gx   1 53.6   +19  50  u   Ari    1.4   15.  p F,  S,  R,  glbN
   719   Gx   1 53.7   +19  49  r   Ari          14.  p eF,  R,  vF*  f
   727   Gx   1 53.7   -35  52  r   For               F,  S,  R,  bM
   724    -   1 53.8   -23  52  r   For               vF,  pL,  R,  gbM,  S*  ssp;  = 723
   723   Gx   1 53.9   -23  46  r   Cet          13.  p pF,  vS,  R,  vgbM
   717   Gx   1 54.0   +36  13  r   And          14.  p vF,  pS,  *15  sf  1'
   729   D*   1 54.0   -35  49  A   For               eeF,  S,  R
   745   Gx   1 54.2   -56  41  c   Eri    1.5         pB,  S,  R,  gbM
I1746    Gx   1 54.3   +04  48  v   Psc    1.9         F,  S,  pR,  gbM
   754   Gx   1 54.4   -56  46  c   Eri    0.7         vF,  S,  R,  bM
   756   Gx   1 54.5   -16  43  r   Cet          15.  p F,  vS,  R,  bMN
   721   Gx   1 54.8   +39  23  s   And    2.0   13.4   eF,  pL
   722   Gx   1 54.8   +20  41  r   Ari          14.  p vF,  vS,  R,  beta  Ari  n
   734   Gx   1 54.8   -17  03  r   Cet               vF,  vS,  R,  bMN,  *11  p  11s
   731   Gx   1 54.9   -09  01  s   Cet    1.7   13.  p eF,  stellar
I 172    Nb   1 54.9   +00  49  x   Cet    0.1         pB,  S,  R,  bM
   713   Gx   1 55.1   -09  05  r   Cet          15.  p eF,  pS,  E  90deg  ,  glbMN,  *14  np
   728   ***  1 55.1   +04  12  r   Psc               suspected  neb
I 171    Gx   1 55.2   +35  17  u   Tri    2.5   14.  p pB,  pS,  cE,  *  nf
   730     *  1 55.3   +05  37  r   Psc               vF,  very  stellar
   726   Gx   1 55.6   -10  49  r   Cet          14.  p vF,  pL,  iR,  *9  3'  f
   749   Gx   1 55.6   -29  57  r   For          14.  p pB,  S,  E,  bM
   758   Gx   1 56.0   -03  06  r   Cet               vF,  vS
I 173    Gx   1 56.0   +01  17  v   Cet    1.2         F,  pS,  R,  lbM
I1748    Gx   1 56.1   +17  39  u   Ari    1.2   15.  p vF
   747     -  1 56.2   -09  28  r   Cet               eF,  pS,  lE  180deg
I1749    Gx   1 56.2   +06  45  u   Psc    1.2   15.  p F,  S,  E  ns,  biN,  r
I 174    Gx   1 56.3   +03  46  u   Psc    1.7   15.  p neb  *13
I 175    Nb   1 56.3   +01  20  x   Cet    0.2         vF,  dif,  diffic
   733   Gx   1 56.4   +33  04  r   Tri               vF,  2'  p  736
   741   Gx   1 56.4   +05  38  s   Psc    3.2   11.3   pF,  S,  R,  p  of  2,  pos  102deg
   748   Gx   1 56.4   -04  28  v   Cet    2.9         pF,  *9  np
   755   Gx   1 56.4   -09  04  v   Cet    4.0         vF,  pS,  vlE
   757     -  1 56.4   -08  55  r   Cet               F,  S,  gbMN;  = 755?
I1750    Gx   1 56.4   +04  05  u   Psc    1.1   15.  p vF,  vS,  pR,  N
I1751        1 56.4   +05  38  x   Psc               pB,  pS,  R,  *9  np;  = 741
   732   Gx   1 56.5   +36  48  r   And          15.  p vF*  in  vF,  vS,  R  neby
   742   Gx   1 56.5   +05  38  s   Psc    0.2   15.  p vF,  vS,  R,  sbM,  f  of  2
   735   Gx   1 56.6   +34  11  s   Tri    2.0   14.  p eeF,  stellar
   736   Gx   1 56.7   +33  03  s   Tri    2.0   12.2   pB,  R,  bM
   737          1 56.7   +33  03  D   Tri               only  a  faint  star
   796   C+N  1 56.7   -74  13  r   Hyi               eF,  vS,  R,  *  np  25"
   738   Gx   1 56.9   +33  03  r   Tri          15.  p neb,  75"  nf  736
   740   Gx   1 56.9   +33  01  s   Tri    1.7   15.  p F,  L,  cE
I 176    Gx   1 56.9   -02  01  u   Cet    2.4   15.  p pB,  S
I1754    Gx   1 56.9   +04  02  u   Psc    1.1   15.  p F,  S,  gbM
I1758        1 56.9   -16  32  d   Cet               F,  eS,  sbM  *11
   739   Gx   1 57.0   +33  14  r   Tri          15.  p cF,  vS,  R,  in  triangle  of  st
I1756        1 57.0   -00  28  d   Cet               vF,  E  npsf,  *13  close  sf
   762   Gx   1 57.1   -05  26  r   Cet          13.  p vF,  S,  lE,  vglbM
I 177        1 57.1   -00  09  d   Cet               F,  vS,  R,  dif
I1757        1 57.1   -00  29  d   Cet               eF,  vS,  R
   764   D*   1 57.2   -16  02  F   Cet               eF,  vS,  iR,  gbM
I1755    Gx   1 57.2   +14  34  u   Ari    1.6   15.  p F,  S,  dif
I1752        1 57.3   +28  37  d   Tri               F,  vS,  *14.5  att
I1753        1 57.3   +28  36  d   Tri               F,  vS,  dif,  14.5  close
   763     -  1 57.4   -08  59  r   Cet               vF,  pL,  E  65deg  ,  gbMN
   750   Gx   1 57.5   +33  13  s   Tri    1.6   12.2   cB,  pL,  R,  D  with  751  at  25",  pos  173deg
I1760        1 57.5   -32  00  d   For               eF,  pS,  R,  (decl  1deg  farther  s?)
   751   Gx   1 57.6   +33  12  s   Tri    1.3   12.5   pF,  eS,  R,  bM,  Dneb  with  750
I1747    Pl   1 57.6   +63  20  s   Cas    0.2   14.  p PN  ,  stell
   753   Gx   1 57.7   +35  55  s   And    2.9   12.4   pB,  pL,  R,  gmbM
   752   OC   1 57.8   +37  41  s   And   50.     5.7   Cl,  vvL,  Ri,  st  L  &  sc
   759   Gx   1 57.8   +36  20  s   And    2.1   14.  p Cl,  vS,  R
   760   D*   1 57.8   +33  21  r   Tri               vF,  R,  761  nf
   761   Gx   1 57.8   +33  23  s   Tri    1.6   15.  p pF,  cL,  4  F  st  nr
   782   Gx   1 57.8   -57  46  s   Eri    2.1   13.  p pB,  pL,  lE,  *12  att
I1762    Gx   1 57.8   -33  14  c   For    1.7         eeF,  pS,  R,  *7  nf
   746   Gx   1 57.9   +44  56  s   And    1.9   13.  p vF,  pS,  lE,  sev  st  nr
I1759    Gx   1 57.9   -32  59  c   For    1.8         pB,  vS,  R,  bM,  *10  close  sp
   744   OC   1 58.4   +55  29  s   Per   11.     7.9   Cl,  pL,  pRi,  iF,  st  11...13
   775   Gx   1 58.5   -26  18  r   For          14.  p pF,  S,  R,  glbM
   743   OC   1 58.7   +60  11  s   Cas    5.          Cl,  not  Ri,  D*  (h  1098)
   766   Gx   1 58.7   +08  20  r   Psc          14.  p vF,  S,  R,  *11  at  2',  pos  75deg
   768   Gx   1 58.7   +00  31  r   Cet          14.  p eF,  pS,  R,  *8  f  30s
   765   Gx   1 58.8   +24  53  r   Ari          14.  p vF,  vS
I1763        1 58.8   -27  47  d   For               eeF,  S,  R,  *8  ssf
   767   Gx   1 58.9   -09  35  r   Cet          14.  p eF,  pS,  E  160deg
I 178        1 58.9   +36  37  d   And               pF,  N  =  13m
I1761    Gx   1 58.9   +00  34  z   Cet          15.  p vF,  vS,  R,  gbMN
   773   Gx   1 59.0   -11  31  r   Cet          14.  p cF,  pL,  E  0deg  ,  glbM
   802   Gx   1 59.1   -67  52  c   Hyi    0.7         eeF,  vS,  R,  *13  p  100"
   770   Gx   1 59.2   +18  57  s   Ari    1.3   14.  p vF,  S,  R,  sp  772
   772   Gx   1 59.3   +19  01  s   Ari    7.1   10.3   B,  cL,  R,  gbM,  r
   774   Gx   1 59.4   +14  01  r   Ari          14.  p vF,  stellar
   769   Gx   1 59.5   +30  54  r   Tri          13.  p vF,  vS,  iR,  bM,  F*  att
I 183    Gx   1 59.6   -05  22  m   Cet    1.0   15.  p F,  vS,  R,  lbM
   779   Gx   1 59.7   -05  58  s   Cet    4.1   11.0   cB,  L,  mE  162deg  ,  mbM
   795   Gx   1 59.8   -55  49  c   Eri    1.5         pF,  S,  R,  2  st  11  nr
I 182    Gx   1 59.8   +07  25  u   Psc    2.0   15.  p F,  pL,  biN
   776   Gx   1 59.9   +23  38  r   Ari          13.  p F,  pL
I 184    Gx   1 59.9   -06  50  m   Cet    1.0   14.  p eF,  vS
I 180    Gx   2 00.0   +23  37  z   Ari          15.  p vF,  eS,  R,  stellar,  sf  776
I 181    Gx   2 00.0   +23  40  z   Ari          16.  p eF,  eS,  stellar
I1767        2 00.0   -11  07  d   Cet               eF,  pS,  bet  2  st  10.5,  2  st  n
   781   Gx   2 00.1   +12  38  r   Ari          14.  p eF,  stellar
I 185    Gx   2 00.1   -01  31  m   Cet    0.5   16.  p eF,  vS,  dif
   777   Gx   2 00.2   +31  26  s   Tri    3.0   12.  p pB,  pL,  R,  glbM
I 179        2 00.2   +38  02  D   And               pB,  S,  lE,  *9.5  nf
   778   Gx   2 00.3   +31  17  r   Tri          14.  p eF,  vS,  R,  lbM
I 186    Gx   2 00.4   -01  33  z   Cet          15.  p F,  double,  dist  15"
I1764    Gx   2 00.4   +24  34  u   Ari    1.7   14.  p F,  vS,  R,  lbM
   780   Gx   2 00.5   +28  13  r   Tri          14.  p vF,  vS,  E,  3  st  p
I1765        2 00.6   +31  51  x   Tri               S*  att  p;  = 783
I1768    Gx   2 00.8   -25  02  c   For    1.9         eeF,  pS,  R,  3  st  9  sf,  v  diffic
I1769        2 00.9   -31  55  d   For               eF,  eS,  mE  80deg
   787   Gx   2 01.0   -09  00  r   Cet          13.  p vF,  S
   783   Gx   2 01.1   +31  52  s   Tri    1.8   13.  p eF,  S,  iR,  vF  st  att;  = IC  1765
   788   Gx   2 01.1   -06  49  s   Cet    1.8   12.3   pF,  pS,  R,  bM
I1766        2 01.2   +31  47  x   Tri               no  descr;  = 785
   784   Gx   2 01.3   +28  50  s   Tri    6.2   11.8   vF,  L,  E  (double?)
   786   Gx   2 01.5   +15  38  r   Ari          14.  p eF,  vS
   790   Gx   2 01.5   -05  23  r   Cet          13.  p cF,  cS,  R,  bM
   813   Gx   2 01.6   -68  26  c   Hyi    1.3         pF,  S,  R,  gbM
   791   Gx   2 01.7   +08  29  r   Psc          15.  p vF,  S,  *14  f  3'
   785   Gx   2 01.8   +31  49  r   Tri          14.  p eF,  eS,  vF*  att;  = IC  1766
I 187        2 01.9   +26  28  d   Tri               eeF,  R
I 189    Gx   2 01.9   +23  33  m   Ari    0.7   15.  p vF,  vS,  R,  *13.5  close
I 188        2 02.0   +27  02  d   Tri               eeF,  vS,  R
I 190    Gx   2 02.1   +23  32  m   Ari    0.3   15.  p F,  vS,  R,  mbM
I1770        2 02.2   +09  59  d   Psc               F,  vS,  R,  stell
   792   Gx   2 02.3   +15  42  r   Ari          14.  p eF,  S,  R,  *11  75deg
   799   Gx   2 02.3   -00  06  r   Cet          14.  p eeF,  pS,  R,  n  of  2
   800   Gx   2 02.3   -00  08  r   Cet          14.  p eeF,  S,  R,  s  of  2
I1771        2 02.3   +09  58  d   Psc               F,  vS,  R,  stell
   789   Gx   2 02.5   +32  04  r   Tri          14.  p vF,  S,  lE
   794   Gx   2 02.5   +18  22  r   Ari          14.  p vF,  cS,  stellar;  = IC  191
I 191        2 02.5   +18  22  x   Ari               pB,  pL,  lE;  = 794
I 192    Gx   2 02.5   +16  01  u   Ari    1.1   15.  p F,  L,  R,  lbM
I1772    Gx   2 02.6   +07  44  m   Psc    0.6   15.  p F,  S,  slbM,  *8.5  166"  n
I 193        2 02.7   +11  05  d   Ari               eF,  pS,  lE,  B*  sf,  F*  f
   793     -  2 02.9   +32  00  r   Tri               vvF,  bet  2  st,  sf  789
   814   Gx   2 02.9   -14  38  A   Cet          16.  p eF,  S,  R,  gbM
   815   Gx   2 02.9   -14  42  A   Cet          16.  p eF,  vS,  R,  gbM
I 194    Gx   2 03.1   +02  36  u   Cet    1.7   15.  p vF,  vS,  R,  *9.5  f  15s
   771     -  2 03.4   +72  25  s   Cas     4.0   suspected  neb*  (50  Cas)
   797   Gx   2 03.4   +38  07  r   And          13.  p vF,  S,  iR,  sbM,  *  nr
   798   Gx   2 03.4   +32  04  r   Tri          14.  p eF,  vS
   806   Gx   2 03.6   -09  56  r   Cet          14.  p eeF,  S,  R,  v  diffic,  pB*  n
   801   Gx   2 03.7   +38  15  r   And          13.  p eF,  pS,  iR,  D*  close  f
I 195    Gx   2 03.7   +14  42  u   Ari    1.5   14.  p eeF,  S,  R,  F*  s
   803   Gx   2 03.8   +16  02  s   Ari    3.3   12.4   vF,  S,  iR,  glbM,  *10  p  3s  .5
   804   Gx   2 03.9   +30  49  r   Tri          14.  p eeF,  vS,  R,  lbM
I 196    Gx   2 03.9   +14  43  a   Ari               pF,  pS,  R,  3  st  nr
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I1774   Gx   2 03.9   +15  18  u   Ari    2.1   15.  p vF,  dif
  808   Gx   2 04.0   -23  19  v   Cet    1.6         vF,  pS,  vlE
I1773   Gx   2 04.0   +30  49  u   Tri    1.4   15.  p vF,  vS,  gbM,  r
I 197   Gx   2 04.1   +02  47  u   Psc    1.0   14.  p pB,  S,  E 225deg   gbM
  805   Gx   2 04.4   +28  48  r   Tri          14.  p eF,  eS,  R,  2 st 14  p
  809   Gx   2 04.4   -08  43  r   Cet          14.  p vF,  S,  R
  811   Gx   2 04.7   -10  06  r   Cet          14.  p eF,  eS,  R (neb?),  *10  s 1'
  807   Gx   2 04.8   +28  59  r   Tri          14.  p vF,  vS,  iR,  bet  2 st  n & sp
I1776   Gx   2 05.2   +06  06  u   Psc    2.3   14.  p F,  pL,  iR,  dif
  810   Gx   2 05.3   +13  14  r   Ari          15.  p vF,  vS,  R,  bM
I1775   Gx   2 05.3   +13  31  m   Ari    0.6   15.  p F,  S,  dif,  *13.5  nr
I 198   Gx   2 06.1   +09  17  v   Psc    1.4         pB,  pS,  R,  bM
I1777   Gx   2 06.1   +15  12  z   Ari          16.  p F,  eS,  R,  stell
I 199   Gx   2 06.3   +09  13  u   Psc    1.6   15.  p F,  S,  R,  bM
I1778        2 06.3   +09  13  d   Psc                F,  S,  R,  gbMN
I1779   Gx   2 06.5   +03  41  z   Cet          15.  p F,  S,  R,  *14  nr
  822   Gx   2 06.6   -41  09  r   Phe                cF,  vS,  R,  sbM,  r
  812   Gx   2 06.8   +44  34  s   And    3.2   13.  p eF,  pL,  E 45deg  ,  bM
  824   Gx   2 06.8   -36  28  r   For                F,  S,  R,  vsvmbM  *13
I1781   Gx   2 06.9   -00  31  z   Cet          15.  p F,  vS,  R,  N
I1780   Gx   2 07.0   +14  44  m   Ari    0.6   15.  p F,  S,  dif,  sev  st  9-10  nr
  823   Gx   2 07.3   -25  27  r   For          14.  p vF,  vF  D* inv
I 201        2 07.3   +09  06  d   Cet                vF,  S,  dif
I1782   Gx   2 07.3   -25  27  c   For    2.2         vF,  D* in neb;  = 823
I 200        2 07.4   +31  10  d   Tri                pB,  pL,  R,  bM
I 204        2 07.4   -01  23  d   Cet                no  description
I 205   Gx   2 07.4   -02  06  u   Cet    1.1   15.  p pB,  vS,  irr  R
I 202   Gx   2 07.5   +09  10  u   Cet    1.6   15.  p vF,  vS,  dif
I 203        2 07.5   +09  07  d   Cet                vF,  vS,  R,  *10  sf
I 206        2 07.5   -07  02  d   Cet                pF,  S,  irr  R
I 207        2 07.7   -06  59  d   Cet                pF,  S,  irr  R
  816   Gx   2 08.0   +29  15  r   Tri          15.  p vF,  vS,  iF
  817        2 08.4   +17  12  D   Ari          14.  p eF,  vS,  R,  2 st  nr
  820   Gx   2 08.4   +14  20  r   Ari          13.  p F,  vS,  R,  bM
  821   Gx   2 08.4   +11  00  s   Ari    3.5   10.8   pB,  vS,  vlE,  svmbM,  *10  np 1'
I 208   Gx   2 08.4   +06  23  m   Cet    1.5   13.  p vF,  pL,  dif
  819   Gx   2 08.5   +29  14  r   Tri          14.  p pF,  vS,  R,  *13  n
  825   Gx   2 08.5   +06  19  r   Cet          14.  p F,  S,  mE
  818   Gx   2 08.7   +38  47  s   And    3.2   13.  p pB,  cL,  lE,  mbM
  829   Gx   2 08.7   -07  47  v   Cet    1.4         F,  S,  *11  s,  1st  of  3
  827   Gx   2 08.8   +07  58  r   Cet          14.  p vF,  S,  E,  bM,  am  st
  852   Gx   2 08.9   -56  44  r   Eri                pF,  pS,  R,  glbM,  r
  830   Gx   2 09.0   -07  46  r   Cet          14.  p pF,  vS,  R,  2nd  of  3
I 209   Gx   2 09.0   -07  04  h   Cet    0.8   13.  p pB,  S,  dif
  833   Gx   2 09.3   -10  08  s   Cet    1.9   12.7   F,  S,  R,  1st  of  4
  826   Gx   2 09.4   +30  44  r   Tri          15.  p eF,  S,  R,  lbM
  835   Gx   2 09.4   -10  08  s   Cet    1.4   12.2   F,  S,  R,  2nd  of  4
I 210        2 09.4   -09  40  d   Cet                no  description
  831   Gx   2 09.5   +06  06  r   Cet          15.  p vF,  pS
  838   Gx   2 09.6   -10  09  s   Cet    1.7   12.8   vF,  vS,  R,  3rd  of  4
  839   Gx   2 09.7   -10  11  s   Cet    1.8   13.0   vF,  pS,  R,  4th  of  4
  842   Gx   2 09.8   -07  45  v   Cet    2.0         vF,  vS,  R,  psbM,  3rd  of  3
  832   Gx   2 10.1   +35  32  r   Tri                F,  vS,  *9-10  sp
I1783   Gx   2 10.1   -32  56  s   For          13.  p pF,  vS,  mE ns,  F* p
  828   Gx   2 10.2   +39  12  s   And    3.2   13.  p pB,  S,  iR,  D* f 15s
  840   Gx   2 10.2   +07  50  s   Cet    2.5   15.  p eF,  vS
  844   Gx   2 10.2   +06  03  r   Cet          15.  p F,  S
  849   Gx   2 10.2   -22  19  r   Cet                eF,  vS,  R (neb?)
  848   Gx   2 10.3   -10  19  s   Cet    1.9   13.1   eeF,  pL,  v diffic,  * nf
  837   Gx   2 10.4   -22  26  r   Cet          15.  p eF,  pS,  mE  0deg  ,  *10  n 1'
  836   Gx   2 10.5   -22  04  r   Cet          14.  p eF,  S,  R,  gbMN
  834   Gx   2 11.0   +37  40  r   And          13.  p vF,  S,  lE
  843   ***  2 11.1   +32  06  r   Tri                glob.  cl.  ,  F,  S,  R
I 211   Gx   2 11.1   +03  52  v   Cet    2.5         F,  pS,  R,  bM,  851  sf
  850   Gx   2 11.2   -01  30  r   Cet          14.  p eF,  eS,  iF
  851   Gx   2 11.2   +03  47  s   Cet    1.5   15.  p eF,  pS,  R,  v  diffic
  841   Gx   2 11.3   +37  30  s   And    2.0   13.  p pB,  vS,  mbMN  = *13-14
  854   Gx   2 11.6   -35  51  r   For                cF,  pS,  lE  0deg  ,  gbM
  853   Gx   2 11.8   -09  18  r   Cet          13.  p F,  S,  E
  846   Gx   2 12.2   +44  34  r   And          13.  p eF,  vS,  R,  gbM
  847   Gx   2 12.2   +44  34  D   And                vF,  pL,  R;  = 846
  845   Gx   2 12.3   +37  29  r   And          14.  p vF,  iF,  stellar
  858   Gx   2 12.5   -22  27  s   Cet    1.6   13.  p eF,  pL,  R
  857   Gx   2 12.6   -31  57  r   For          13.  p cB,  S,  E,  psmbM
  862   Gx   2 13.0   -42  04  r   Phe                F,  vS,  svmbM
  856   Gx   2 13.6   -00  44  r   Cet          14.  p eF,  S,  lE,  F* close  f
I 212   Gx   2 13.6   +16  36  z   Ari          16.  p F,  vS,  R,  stellar
  859        2 13.9   -00  44  F   Cet                pF,  pS,  R,  lbN;  = 856
  855   Gx   2 14.0   +27  53  r   Tri          13.  p F,  S,  lE  90deg  ,  bM
I 213   Gx   2 14.0   +16  28  z   Ari          15.  p F,  S,  gbM,  *13.5  close
I 214   Gx   2 14.0   +05  11  u   Cet    0.9   14.  p pB,  S,  gbM,  r
I 215   Gx   2 14.2   -06  47  m   Cet    1.0   15.  p pB,  E pf
  863   Gx   2 14.6   -00  46  s   Cet    1.4   14.  p vF,  R,  bM,  stellar
  866        2 14.6   -00  46  F   Cet                pF,  pS,  R,  lbN;  = 863
  885        2 14.6   -00  46  F   Cet                vF,  pS,  R,  lbN;  = 863
  860   Gx   2 15.1   +30  47  r   Tri          15.  p *13  in  F neb
  872   Gx   2 15.4   -17  48  r   Cet          14.  p vF,  pS,  mE  0deg  ,  gvlbM,  sev  F st  inv
  864   Gx   2 15.5   +06  00  s   Cet    4.6   11.0   eF,  cL,  R,  gbM,  *12  sf  att
  861   Gx   2 15.8   +35  55  r   Tri          15.  p vF,  S,  D* att  sp
I 216   Gx   2 15.8   -02  01  z   Cet          16.  p vF,  eS,  R,  lbM
I1788   Gx   2 15.8   -31  12  s   For    2.5   12.4   pF,  pS,  R,  2 st  nf
  867        2 15.9   +01  03  F   Cet                eF,  vS,  R,  bM;  = 875
  868   Gx   2 16.0   -00  44  r   Cet          15.  p eF,  pS,  R
I1786   Gx   2 16.0   +05  09  z   Cet          15.  p vF,  vS,  R,  N
  865   Gx   2 16.1   +28  36  r   Tri          14.  p eF,  eS,  iR
  874        2 16.1   -23  11  D   Cet                no  neby;  = D*?
I 217        2 16.2   -11  56  d   Cet                F,  pL,  E ns
I1784   Gx   2 16.2   +32  39  s   Tri    1.6   13.2   F,  L,  E pf,  gbM
I1787        2 16.2   -11  57  d   Cet                eF,  vmE,  bet  2 st  pf,  *8  nf
I1785        2 16.4   +32  39  d   Tri                F,  S,  R,  stell
  873   Gx   2 16.6   -11  20  r   Cet          13.  p F,  pL,  R,  vglbM
  879   Gx   2 16.8   -08  58  r   Cet                eF,  pS,  iR,  bM
  875   Gx   2 17.1   +01  14  r   Cet          14.  p vF,  vS
I 218   Gx   2 17.1   +01  18  m   Cet    0.7   15.  p vF,  S,  dif,  *13.5  close,  875  sf
  870   Gx   2 17.2   +14  33  r   Ari          16.  p eF,  stellar,  2 vF st sp,  s of 871
  871   Gx   2 17.2   +14  33  s   Ari    1.3   13.5   vF,  vS,  E,  *10  sf  5'
  888   Gx   2 17.5   -59  52  c   Hor    1.3         eF,  S,  R,  2 or  3 vF st  nr
I1790        2 17.6   +12  30  d   Ari                F,  S,  dif
I1791   Gx   2 17.7   +12  29  u   Ari    1.2   15.  p S,  R,  like  neb  *11
  878   Gx   2 17.8   -23  22  r   Cet          15.  p eF,  vS,  R
  876   Gx   2 17.9   +14  31  v   Ari    2.1         eF,  S,  R,  107"  sp  877
  877   Gx   2 18.0   +14  33  s   Ari    2.3   11.8   pF,  pL,  lE,  pgbM,  *12  sf  1',  *9  166deg  ,
    285"
I1789        2 18.2   +32  24  d   Tri                F,  S,  iF,  ?
  880   Gx   2 18.4   -04  11  F   Cet                eF,  vS,  R,  sbMN
I 219        2 18.6   -06  55  d   Cet                pB,  S,  stellar
  881   Gx   2 18.7   -06  35  s   Cet    2.9         F,  pS,  E,  bM,  2 or  3 st  nr
  869   OC   2 19.0   +57  09  s   Per   30.     4.  p !  Cl,  vvL,  vRi,  st  7...14
  883   Gx   2 19.0   -06  45  r   Cet          13.  p pF,  pS,  vlE,  bM,  D* nr
I1792   Gx   2 19.0   +34  29  u   Tri    1.7   15.  p F,  S,  pR,  gbM,  r
  889   Gx   2 19.1   -41  45  r   Phe                vF,  vS,  R,  bM,  *7  sf
I 220        2 19.2   -12  47  d   Cet                vF,  dif,  vlbN
  887   Gx   2 19.6   -16  04  r   Cet          13.  p F,  S,  iR,  pgbM
  882   Gx   2 19.7   +15  49  r   Ari          15.  p eF,  R,  gbM,  *16  nr
  893   Gx   2 20.0   -41  23  r   Phe                pF,  pS,  R,  lbM,  *8  f 4'
  892   Gx   2 20.7   -23  07  r   Cet                eF,  eS,  E?,  neb?
  897   Gx   2 21.1   -33  42  r   For                pB,  S,  R,  psbM,  *10  f 35"
I1794   Nb   2 21.5   +15  46  x   Ari                F,  vS,  dif,  r
  894    -   2 21.6   -05  30  r   Cet                vF,  E,  bM,  Dneb  with  895,  conn
  895   Gx   2 21.6   -05  31  s   Cet    3.6   11.8   F,  vL,  iR,  gbM,  Dneb  with  894,  conn
I1793   Gx   2 21.6   +32  34  u   Tri    1.8   15.  p F,  S,  E 200deg  ,  glbM
  899   Gx   2 21.9   -20  48  s   Cet    1.9   13.  p pB,  S,  gbM,  r,  D* p
  890   Gx   2 22.0   +33  16  s   Tri    2.9   12.  p B,  S,  R,  bM,  3 F st  sp
I 223   Gx   2 22.0   -20  45  c   Cet    1.4         vF,  S,  dif,  vF  stell  N
  884   OC   2 22.4   +57  07  s   Per   30.     4.  p !  Cl,  vL,  vRi,  ruby  * M
  902   Gx   2 22.4   -16  40  r   Cet          14.  p eF,  vS,  R
  891   Gx   2 22.6   +42  21  s   And   13.5   10.0   !  B,  vL,  vmE  22deg
  905   Gx   2 22.6   -08  43  r   Cet                eF,  eS,  R,  *?
I 221   Gx   2 22.7   +28  16  u   Tri    2.2   14.  p F,  pL,  R
I 222   Gx   2 22.7   +11  38  m   Ari    0.6   14.  p F,  S,  irr,  N,  excentr
I1796   Gx   2 22.8   -41  22  c   Phe    1.5         vF,  vS,  R
  907   Gx   2 23.0   -20  43  s   Cet    1.9   13.  p F,  S,  E 90deg  ,  gbM
  908   Gx   2 23.1   -21  14  s   Cet    5.5   10.2   cB,  vL,  E
  898   Gx   2 23.3   +41  57  s   And    2.1   14.  p eF,  vS,  lE
  886    -   2 23.5   +63  47  r   Cas                Cl,  L,  lC,  sc,  st  9...13
  900   Gx   2 23.5   +26  31  r   Ari          15.  p vF,  vS,  stellar
  901    -   2 23.6   +26  34  r   Ari                eF,  vS;  = 900?
  903   Gx   2 23.8   +27  22  r   Ari                eF,  eS,  R
  904   Gx   2 24.0   +27  21  r   Ari          15.  p vF,  vS,  R,  lbM
I 224   Gx   2 24.7   -12  34  m   Cet    0.5   14.  p F,  S,  irr  R,  lbM
  896   Nb   2 24.8   +61  54  s   Cas   27.         eF,  pL,  iF
  922   Gx   2 25.1   -24  47  s   For    1.9   12.2   cF,  pL,  R,  gpmbM
  906   Gx   2 25.2   +42  06  s   And    2.0   14.  p eF,  iE
  909   Gx   2 25.4   +42  03  r   And          14.  p vF,  vS,  vS* inv
  910   Gx   2 25.4   +41  50  s   And    2.3   15.  p vF,  pS,  stellar
I1797   Gx   2 25.5   +20  24  u   Ari    1.2   15.  p F,  vS,  iF,  dif
  915   Gx   2 25.7   +27  14  r   Ari          15.  p eF,  vS,  stellar
  916   Gx   2 25.7   +27  15  r   Ari          15.  p eF
  911   Gx   2 25.8   +41  59  r   And          14.  p eF,  vS,  R,  bM
  912   Gx   2 25.8   +41  47  r   And          15.  p F,  vS,  R,  bM
  913   Gx   2 25.8   +41  48  r   And                eF,  vS,  lbM
  918   Gx   2 25.9   +18  30  s   Ari    3.4   13.  p pF,  L,  R,  *10  sf  3'
  914   Gx   2 26.1   +42  09  r   And          14.  p eF,  pL,  dif
  917    -   2 26.1   +32  14  r   Tri                vF,  S,  R,  4 st  nr (vS  Cl?)
  926   Gx   2 26.1   -00  20  s   Cet    2.5   14.  p vF,  pS
  919   Gx   2 26.2   +27  13  r   Ari          15.  p eF
I1798        2 26.3   +13  27  d   Ari                vF,  vS,  sbM  *15
  939   Gx   2 26.4   -44  26  r   Eri                vvF,  S,  R,  gvlbM
I 225   Gx   2 26.5   +01  09  u   Cet    1.8   15.  p F,  S,  R,  vlbM,  *14  nf 2'
I1795   Nb   2 26.5   +62  04  x   Cas   20.         patch  of  neby
  921   Gx   2 26.6   -15  50  r   Cet          14.  p eF,  S,  R,  gbM
  927   Gx   2 26.6   +12  09  s   Ari    1.4   15.  p F,  S,  bM
  944   Gx   2 26.7   -14  30  r   Cet          14.  p eF,  S,  mE  0deg  ,  sbM;  = IC  228
I 228   Gx   2 26.7   -14  31  m   Cet    0.8   14.  p vS,  R,  gbM
  924   Gx   2 26.8   +20  30  r   Ari          14.  p eF,  vS,  iR
  925   Gx   2 27.3   +33  35  s   Tri    9.8   10.0   cF,  cL,  E,  vgbM,  2 st  13  np
  929   Gx   2 27.3   -12  05  r   Cet          15.  p eF,  S,  E 170deg  ,  *8.5  n 4'
I 229        2 27.4   -23  49  d   Cet                neb,  10m
  923   Gx   2 27.6   +41  59  r   And          14.  p vF,  S,  R,  gsbM
  934   Gx   2 27.6   -00  14  r   Cet          14.  p vF,  eS,  PN  ?
  936   Gx   2 27.6   -01  09  s   Cet    5.2   10.1   vB,  vL,  R,  mbMN,  p of  2
  928   Gx   2 27.7   +27  14  r   Ari          14.  p eF,  vS,  stellar
I 226   Gx   2 27.7   +28  11  u   Tri    2.3   16.  p pF,  S,  R,  bM,  2 F st  n
  920   Gx   2 27.8   +45  58  r   And          15.  p eF,  eS,  R,  1 or  2eF st  nr
  930   Gx   2 27.9   +20  20  r   Ari          13.  p eF,  S,  iR,  vgbM,  932  sf  1'
  932   Gx   2 27.9   +20  19  u   Ari    1.9   14.  p F,  S,  lE,  3 st  inv
I 227   Gx   2 28.0   +28  10  u   Tri    2.3   15.  p F,  pS,  R,  lbM
  935   Gx   2 28.2   +19  36  r   Ari          14.  p pB,  pS,  R,  *  f 6s
I1801        2 28.2   +19  35  d   Ari                F,  S,  glbM,  dif
  931   Gx   2 28.3   +31  19  r   Tri          14.  p F,  pL,  iR
  938   Gx   2 28.5   +20  17  r   Ari          14.  p pB,  S,  R,  lbM,  *11  sf
  941   Gx   2 28.5   -01  09  s   Cet    2.8   12.4   vF,  cL,  R,  f of  2
  947   Gx   2 28.5   -19  04  s   Cet    2.6   12.  p pB,  E,  gbM
  945   Gx   2 28.6   -10  32  s   Cet    2.5   12.  p vF,  L,  iR,  glbM
I1800   OC   2 28.6   +31  24  x   Tri                eF,  S;  eS  Cl?
I1799   Gx   2 28.7   +45  58  u   And    1.3   15.  p vF,  S,  lbM,  *13  p 0'.5
I1802        2 28.7   +23  07  d   Ari                *11  np 1'
  948   Gx   2 28.8   -10  31  s   Cet    1.4   14.  p vF,  S,  R
  951   Gx   2 28.8   -22  20  r   Cet          15.  p eF,  S,  E 0deg  ,  D*?
I 230        2 28.8   -10  50  d   Cet                eF,  S,  *9.4  np  9'
  954   Gx   2 28.9   -41  25  v   Eri                vF,  pL,  lE,  gbM,  *8  sf  3'
  933   Gx   2 29.2   +45  56  r   And          15.  p eF,  eS,  R,  B* nf
  942   Gx   2 29.2   -10  50  s   Cet          14.  p vF,  R,  Dneb  with  943,  F Nucl
  943   Gx   2 29.2   -10  50  v   Cet                vF,  R,  Dneb  with  942,  F Nucl
  950   Gx   2 29.2   -11  01  r   Cet          14.  p eF,  S,  gbM
I1803        2 29.3   +23  09  d   Ari                stell  N
  940   Gx   2 29.4   +31  39  r   Tri          13.  p F,  S,  R,  bM
I1804        2 29.4   +23  10  d   Ari                no  descr
I1810   Gx   2 29.4   -43  04  c   Eri    1.4         vF,  R,  stell  N
  937   Gx   2 29.5   +42  16  r   And          15.  p vF*  slightly  nebulous
I1812   Gx   2 29.5   -42  49  c   Eri    2.1         vF,  bM
I1806        2 29.6   +22  57  d   Ari                F,  vS,  R,  bMN
I 231   Gx   2 30.0   +01  10  u   Cet    1.1   15.  p F,  vS,  R,  stellar
I1807   Gx   2 30.4   +22  57  z   Ari          16.  p F,  vS,  R,  lbM
  963   Gx   2 30.5   -04  14  F   Cet                eF,  S,  R,  gbM,  r;  = IC  1808
I1808   Gx   2 30.5   -04  14  m   Cet    0.6   14.  p F,  vS,  R,  gbM,  r
  955   Gx   2 30.6   -01  07  s   Cet    3.0   12.0   pB,  S,  E,  psbM
I1811   Gx   2 30.6   -34  16  c   For    1.9         eeF,  S,  R,  2 st  p,  np  of  2  (sic)
  946   Gx   2 30.7   +42  15  r   And          14.  p F,  S,  R,  glbM
  958   Gx   2 30.7   -02  57  s   Cet    2.8   12.2   pF,  ilE,  bM
  949   Gx   2 30.8   +37  08  s   Tri    2.8   11.9   cB,  L,  E,  vgbM
I1813   Gx   2 30.8   -34  13  c   For    1.6         eF,  eS,  R,  F* n,  2 st  np,  sf  of  2  (sic)
  964   Gx   2 31.1   -36  01  r   For                pB,  pS,  mE  215deg
I1814   Gx   2 31.1   -36  02  c   For    2.1         pB,  pS,  mE;  = 964
  953   Gx   2 31.2   +29  36  r   Tri          14.  p pF,  S,  R,  mbM
  961    -   2 31.2   -06  54  r   Cet                eF,  pS,  E 230deg  ,  *10  att
I 232   Gx   2 31.2   +01  15  u   Cet    1.7   14.  p vF,  S,  R,  (= IC  231?)
  952    -   2 31.3   +34  45  r   Tri                vF,  vS,  R,  bM
  979   Gx   2 31.5   -44  31  r   Eri                F,  S,  R,  bet  2 st  in  par
  960   Gx   2 31.6   -09  17  r   Cet          14.  p eF,  vS,  R,  neb?,  *9  sp
I 233   Gx   2 31.6   +02  49  z   Cet          15.  p pF,  S,  R,  lbM,  vF*  s 1'
I1809   Gx   2 31.6   +22  55  u   Ari    1.2   15.  p pB,  pL,  E 135deg  ,  gbM
I 234   Gx   2 31.7   -00  08  z   Cet          15.  p F,  S,  dif,  r
  966   Gx   2 31.8   -19  53  r   Cet          14.  p eF,  R,  *9.5  sp  1'
I1816   Gx   2 31.9   -36  40  c   For    1.9         vF,  S,  R,  2 st  nr  p
  967   Gx   2 32.2   -17  13  r   Cet          14.  p F,  S,  iR,  gbM
  959   Gx   2 32.3   +35  30  s   Tri    2.2   13.  p eF,  pL,  lE,  lbM
  956   OC   2 32.4   +44  39  s   And    8.     9.  p Cl,  pRi,  st  9...15
  965   Gx   2 32.5   -18  39  r   Cet          14.  p vF,  S,  gbM
I1805   C+N  2 32.7   +61  27  s   Cas   60.     6.5  Cl,  co,  eL  neby  extends  f
  962   Gx   2 32.8   +28  05  r   Ari          14.  p eF,  S,  gbMN
I 235   Gx   2 32.8   +20  39  v   Ari    0.5   14.7   F,  S,  dif
  981   Gx   2 32.9   -10  57  r   Cet          14.  p eF,  S,  gbM
I 236        2 32.9   -00  08  d   Cet                F,  S,  dif,  vlbM
  977   Gx   2 33.0   -10  44  r   Cet          13.  p eF,  pS,  R,  vlbM,  am  sc  st
  975   Gx   2 33.2   +09  37  r   Cet          14.  p vF,  cE
I 237   Gx   2 33.5   +01  08  m   Cet    0.5   15.  p F,  S,  R,  *9.5  p
  957   OC   2 33.6   +57  32  s   Per   11.     7.6  Cl,  pL,  pRi,  st  13...15
  986   Gx   2 33.6   -39  02  s   For    3.7   11.0   pB,  L,  pmE,  sbM,  biN
  989   Gx   2 33.8   -16  30  r   Cet          15.  p F,  vS,  R,  bMN
I1817        2 33.8   +11  12  d   Ari                F,  pL,  E pf,  dif
  976   Gx   2 34.0   +20  59  s   Ari    1.7   12.4   vF,  vS,  4 F st  nr
  968   Gx   2 34.1   +34  30  r   Tri          14.  p pF,  pS,  R,  bM
  969   Gx   2 34.1   +32  58  r   Tri          13.  p S,  R,  psbM,  1st  of  5
I1818        2 34.1   -11  02  d   Cet                vF,  eS,  R,  prob  neb*
  970   Gx   2 34.2   +33  00  r   Tri          15.  p vF,  vS,  R,  2nd  of  5
  971   Gx   2 34.2   +32  59  r   Tri                vF,  vS,  R,  3rd  of  5
  972   Gx   2 34.2   +29  19  s   Ari    3.6   11.3   pB,  cL,  lE,  gmbM,  3 st  s
  973   Gx   2 34.3   +32  31  r   Tri          13.  p eeF,  S,  mE,  pB*  nr  sp
I1815   Gx   2 34.3   +32  26  u   Tri    2.0   14.  p F,  S,  R,  gbMN
  974   Gx   2 34.4   +32  59  r   Tri          14.  p vF,  R,  bM,  4th  of  5
  985   Gx   2 34.6   -08  47  s   Cet    1.3   13.5   vF,  vS,  R,  bMN
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   984   Gx   2 34.7   +23  26  r   Ari          14.  p vF,  eS,  R,  bM
   978   Gx   2 34.8   +32  52  r   Tri          14.  p pB,  R,  5th  of  5
   983    -   2 35.0   +31  31  r   Tri               eF,  vS,  R,  bM
I 238   Gx   2 35.3   +12  49  u   Ari   1.8    14.  p vF,  vS,  R,  mbM
   982   Gx   2 35.4   +40  57  r   And          14.  p F,  S,  nf  of  2
   988   Gx   2 35.4   -09  21  s   Cet   4.7    11.  p neb  *7.5
   980   Gx   2 35.5   +40  54  r   And          13.  p vF,  pS,  sp  of  2
   991   Gx   2 35.5   -07  09  s   Cet   2.7    12.  p vF,  cL,  iF,  vlbM
I1819    Gx   2 35.7   +04  03  z   Cet          15.  p F,  vS,  R
I1822         2 35.7   -08  34  d   Cet               *13.5  slightly  nebs
I1820    Gx   2 35.8   +06  03  z   Cet          15.  p F,  vS,  R,  bMN
  1025   Gx   2 36.3   -54  52  c   Hor   1.2         eF,  S,  R,  p  of  2
   990   Gx   2 36.4   +11  39  r   Ari          14.  p F,  S,  R,  psbM
I1821    Gx   2 36.4   +13  46  z   Ari          15.  p pF,  S,  gbM,  dif
I 239   Gx   2 36.5   +38  58  s   And   4.6    11.2   vF spiral,  F stellar  N
  1031   Gx   2 36.6   -54  52  c   Hor   2.2         F,  S,  R,  gbM,  *11  s  2'
   993   Gx   2 36.7   +02  03  u   Cet   1.1    15.  p eF,  vS
   994         2 36.7   +02  03  F   Cet               eeF,  pS,  R,  vF*;  = 993
   987   Gx   2 36.8   +33  19  r   Tri          13.  p F,  S,  vlE,  bM,  r,  2 st  14  np
   992   Gx   2 37.2   +21  06  D   Ari          13.  p pF,  pS,  mE,  * s
   997   Gx   2 37.2   +07  18  r   Cet          14.  p F,  S
   998   Gx   2 37.2   +07  26  r   Cet          15.  p vF
  1006         2 37.4   -11  02  F   Cet               eeF,  pS,  R,  lbM;  = 1010
  1010   Gx   2 37.5   -11  02  r   Cet          14.  p eF,  S,  R
  1004   Gx   2 37.6   +01  57  r   Cet          14.  p pF,  vS,  R,  vmbM,  *11  p  2s
  1011   Gx   2 37.6   -11  01  r   Cet          15.  p eF,  S,  R,  lbM
  1007   Gx   2 37.8   +02  08  r   Cet          15.  p eF,  stellar
  1013   Gx   2 37.8   -11  31  r   Cet          14.  p eeF,  vS,  R,  bet  2 dist  D st
  1014    -   2 37.8   -09  32  r   Cet               eF,  eS,  iR,  p  of  2
  1017   Gx   2 37.8   -11  01  r   Cet          14.  p eeF,  vS,  R,  v diffic
  1008   Gx   2 37.9   +02  04  r   Cet          15.  p vF,  eS,  stellar
I 241   Gx   2 37.9   +02  20  u   Cet   1.2    14.  p vF,  pS,  R,  stell  N
  1018   Gx   2 38.0   -09  34  r   Cet          15.  p eF,  vS,  E  180deg  , f  of  2
  1037   Gx   2 38.0   -01  51  r   Cet          14.  p eeF,  vS,  mE,  v diffic
  1015   Gx   2 38.1   -01  19  s   Cet   3.5    12.  p vF,  S
  1034   Gx   2 38.2   -15  49  r   Cet          14.  p vF,  vS,  lE,  lbM,  2 st  11- 12  p  20s
  1009   Gx   2 38.3   +02  18  r   Cet          15.  p eeF,  pS,  R,  *9  sf
  1016   Gx   2 38.3   +02  08  s   Cet   2.8    13.  p F,  S,  R,  psbM
  1019   Gx   2 38.4   +01  55  s   Cet   1.2    15.  p vF,  S,  lE
   995   Gx   2 38.5   +41  32  r   And          15.  p vF,  vS
  1022   Gx   2 38.5   -06  40  s   Cet   2.5    11.4   cB,  pL,  R,  mbM,  *11  nf  2'
I 242   Gx   2 38.5   -06  55  m   Cet   0.9    15.  p eF,  eS,  vF*  close
I 243   Gx   2 38.5   -06  55  m   Cet   0.9    15.  p vF,  vS,  R,  bM
I1823    Gx   2 38.6   +32  04  u   Tri   2.3    15.  p F,  S,  iF,  dif
   996   Gx   2 38.7   +41  39  r   And          14.  p vF,  vS
  1020   Gx   2 38.7   +02  13  r   Cet          15.  p eF,  vS
   999   Gx   2 38.8   +41  40  r   And          14.  p eF
  1021   Gx   2 38.8   +02  12  r   Cet          15.  p eF,  S
  1000   Gx   2 38.9   +41  27  r   And          15.  p vvF,  pS,  dif
  1002   Gx   2 38.9   +34  37  r   Tri          14.  p vF,  vS,  iR,  bMN
I 245   Gx   2 38.9   -14  18  m   Cet   0.7    14.  p pB,  S,  R,  lbM
I1825    Gx   2 38.9   +09  06  u   Cet   1.4    15.  p F,  S,  R,  gbMN
I 240         2 39.1   +41  44  d   Per               vF,  pS
I1826    Gx   2 39.1   -27  27  c   For   1.7         pB,  cS,  R,  *8  nr  p;  = IC  1830
I1830    Gx   2 39.1   -27  27  s   For   1.8   12.8   vF,  S,  susp,  eF*  1'.5  sp
  1001   Gx   2 39.2   +41  40  r   Per          14.  p vF,  vS
  1024   Gx   2 39.2   +10  51  s   Ari   4.7    14.  p pF,  S,  lE,  bM,  *11  nf  1'
  1003   Gx   2 39.3   +40  52  s   Per   5.4    11.5   pF,  L,  E  90deg  +/-  , mbM,  r
  1012   Gx   2 39.3   +30  09  s   Ari   2.9    13.  p F,  pS,  iR,  bM,  st  inv
  1026   Gx   2 39.3   +06  32  r   Cet          14.  p pF,  S,  R,  psbM
  1032   Gx   2 39.4   +01  06  s   Cet   3.6    13.  p pB,  S,  vlE,  bM,  3 st  trap
I 244   Gx   2 39.4   +02  43  m   Cet   0.6    15.  p vF,  vS,  dif
  1005   Gx   2 39.5   +41  29  r   Per          14.  p vF,  vS
  1028   Gx   2 39.5   +10  50  r   Ari          15.  p eF
  1029   Gx   2 39.5   +10  47  r   Ari          14.  p F,  S,  mE
  1035   Gx   2 39.5   -08  08  s   Cet   2.2    13.  p pF,  L,  mE,  r,  *17  att  sf
  1049   Gb   2 39.7   -34  17  r   For               pB,  S,  R,  stellar
I1827    Gx   2 39.7   +01  33  u   Cet   1.2    14.  p F,  S,  fan- shape,  *13.5  close  s
  1030   Gx   2 39.9   +18  01  r   Ari          14.  p vF,  iE
  1033   Gx   2 40.1   -08  48  r   Cet          14.  p eF,  pL,  iE  190deg  , sbMN
  1038   Gx   2 40.1   +01  30  r   Cet          14.  p eF,  pS,  R,  lbM
I 247   Gx   2 40.1   -11  44  m   Cet   1.2    14.  p pB,  S,  R
  1041   Gx   2 40.3   -05  28  r   Cet          14.  p pF,  pS,  iR,  bM
  1023   Gx   2 40.4   +39  04  s   Per   8.7     9.5   vB,  vL,  vmE,  vvmbM
  1042   Gx   2 40.4   -08  26  s   Cet   4.7    10.9   eeF,  L,  R,  np  of  2
  1045   Gx   2 40.4   -11  18  r   Cet          13.  p F,  S,  R,  bM
I1828    Gx   2 40.4   +19  18  u   Ari   1.6    13.  p F,  S,  iF,  gbMN
  1036   Gx   2 40.5   +19  18  s   Ari   2.0    13.  p F,  S,  R,  lbM
  1047   Gx   2 40.5   -08  09  s   Cet   1.5    15.  p eeF,  pS,  R,  v diffic
I 246         2 40.5   +02  29  D   Cet               eeF,  vF,  R,  2 eF  st  nr
  1048   Gx   2 40.6   -08  33  s   Cet   1.3    14.  p eeF,  pS,  R,  sf  of  2
  1043   Gx   2 40.7   +01  20  r   Cet          15.  p eeF,  S,  R,  v diffic
I1829         2 40.7   +19  19  d   Ari               vF,  vS,  dif,  r
I 250   Gx   2 40.9   -13  19  m   Cet   0.8    15.  p vF,  pS,  iF
  1044   Gx   2 41.1   +08  44  s   Cet   0.6    13.2   vF,  vS,  p  of  2,  *10  p
  1051   Gx   2 41.1   -06  56  t   Cet   1.9         eF,  lE  npsf,  * att  np;  = IC  249
  1052   Gx   2 41.1   -08  15  s   Cet   2.9    10.6   B,  pL,  R,  mbM  *12
I 249   Gx   2 41.1   -06  56  t   Cet   1.9         pB,  vS,  R,  dif,  1051  f
  1046   Gx   2 41.2   +08  43  v   Cet               eF,  vS,  f  of  2
I 251   Gx   2 41.2   -14  58  m   Cet   0.4    15.  p F,  S,  lbM
I1824    OC   2 41.3   +61  37  x   Cas               Cl,  st  F,  perhaps  F neby  p extends  to  it
I 248   Gx   2 41.4   +17  48  u   Ari   1.3    14.  p vF
I1833    Gx   2 41.6   -28  10  c   For   1.6         eeF,  S,  R,  3 D  st  nf
I 252         2 41.7   -14  51  d   Cet               F,  S,  bM
  1055   Gx   2 41.8   +00  26  s   Cet   7.6    10.6   pF,  cL,  iE  80deg  , bM,  *11  n  1'
I1832    Gx   2 41.9   +19  02  m   Ari   0.4    15.  p F,  iF  or  lE  ns,  bMN
  1039   OC   2 42.0   +42  47  s   Per   35.     5.2   Cl,  B,  vL,  lC,  sc  st  9;  = M34
  1065   Gx   2 42.1   -15  06  r   Cet          14.  p eeF,  pS,  * nr  s,  *7.5  p;  = IC  254
I 253   Gx   2 42.1   -15  03  m   Cet   0.3    14.  p pB,  iF,  bM
I 254   Gx   2 42.1   -15  05  m   Cet   0.5    14.  p vF,  eS,  R,  1065  close
  1040    -   2 42.2   +41  30  r   Per               F,  S,  bM;  = 1053?
  1054   Gx   2 42.2   +18  12  r   Ari          14.  p vF,  vS,  lE
  1063   Gx   2 42.2   -05  34  v   Cet   1.6         vF,  pS,  iR,  r?
  1064   Gx   2 42.2   -09  22  r   Cet          14.  p eF,  S,  R
  1050   Gx   2 42.5   +34  46  r   Per          13.  p F,  S,  *18  inv  n
  1059   D*   2 42.6   +18  01  D   Ari               nonexistent
  1027   OC   2 42.7   +61  33  s   Cas   20.     6.7   Cl,  L,  sc  st,  one  10m
  1068   Gx   2 42.7   -00  01  s   Cet   6.9     8.8   vB,  pL,  iR,  sbMrrN;  = M77
  1069   Gx   2 42.8   -08  18  r   Cet          14.  p eeF,  pS,  R,  *8.5  nr  f
I1834         2 42.8   +03  07  d   Cet               F,  pS,  pR,  glbM
  1056   Gx   2 42.9   +28  33  r   Ari          13.  p F,  S,  R,  psbM
  1057   Gx   2 43.0   +32  29  r   Tri          15.  p vF,  double
  1071   Gx   2 43.0   -08  46  r   Cet          15.  p eF,  vS,  E  0deg  , bet  2 st
  1053   Gx   2 43.2   +41  30  r   Per          14.  p vF,  vS,  lE,  3 or  4 st  in  line  nr
  1060   Gx   2 43.2   +32  24  r   Tri          13.  p F,  pL,  R,  lbM,  *7.5  f  46s  , 3'  s
  1061   Gx   2 43.2   +32  27  r   Tri          15.  p vF,  S,  R,  bM
  1070   Gx   2 43.3   +04  58  r   Cet          13.  p pF,  S,  iR,  gbM
I1836    Gx   2 43.3   +03  06  m   Cet          15.  p F,  S,  R,  vlbM
  1058   Gx   2 43.5   +37  21  s   Per   3.0    11.5   pF,  cL,  R,  glbM
  1072   Gx   2 43.5   +00  18  s   Cet   1.7    14.  p eF,  vS,  R,  sev  vF  st  inv
I1837         2 43.5   +00  07  x   Cet               F,  vS,  R,  gbM,  r;  = 1072
  1062   Gx   2 43.7   +32  30  r   Tri          15.  p eeF
  1073   Gx   2 43.7   +01  23  s   Cet   4.9    11.0   vF,  L,  lbN,  er
  1074   Gx   2 43.7   -16  18  r   Cet          14.  p eF,  vS,  R
  1075   Gx   2 43.7   -16  11  r   Cet          15.  p vF,  vS,  bMN
  1076   Gx   2 43.7   -14  45  r   Cet          13.  p vF,  pS,  R,  B* f  22s
  1079   Gx   2 43.7   -29  00  s   For   3.1    11.4   B,  pL,  pmE,  sbM
  1066   Gx   2 43.8   +32  27  r   Tri          15.  p vF,  pL,  R,  lbM,  s  of  2
  1067   Gx   2 43.8   +32  31  s   Tri   1.3    15.  p eF,  S,  n  of  2
  1096   Gx   2 43.8   -59  55  c   Hor   2.3         F,  pS,  R,  glbM
I1835         2 43.8   +14  53  d   Ari               F,  S,  R,  dif

I1840   Gx   2 43.8   -15  42  m   Cet   0.6    15.  p vF,  vS,  mbM,  1081  nf
I1831         2 44.1   +63  36  d   Cas               vF,  eeL
  1078   Gx   2 44.2   -09  26  r   Cet          15.  p eF,  eS,  R;  = 1064?
I1838    Gx   2 44.7   +19  27  m   Ari   0.6    16.  p F,  vS,  R,  sbM  *14
I1839    Gx   2 44.8   +15  15  u   Ari   1.1    15.  p vF,  S,  R,  dif
  1098   Gx   2 44.9   -17  38  D   Eri          14.  p F,  vS,  R,  bMN,  1st  of  3
I1845         2 44.9   -27  57  d   For               eeF,  S,  R,  D * np
  1080   Gx   2 45.2   -04  43  v   Cet   1.4         vF,  pS,  iR
  1081   Gx   2 45.2   -15  35  r   Eri          13.  p eF,  pS,  R
  1099   Gx   2 45.3   -17  43  D   Eri          13.  p F,  pS,  lE,  bMN,  2nd  of  3
  1091         2 45.4   -17  33  D   Eri               vF,  vS,  R,  sbMN
I1842    Gx   2 45.4   +11  28  z   Ari          16.  p F,  vS,  R,  glbM
I1843    Gx   2 45.4   +02  53  u   Cet   1.7    14.  p F,  pL,  E pf,  dif
  1100   Gx   2 45.6   -17  41  D   Eri          13.  p F,  vS,  lE,  bMN,  3rd  of  3
I1841    Gx   2 45.6   +18  56  z   Ari          15.  p F,  vS,  R,  gvlbM
  1082   Gx   2 45.7   -08  13  r   Eri          15.  p eeF,  pS,  lE
  1092   Gx   2 45.7   -17  32  r   Eri          14.  p vF,  vS,  R,  sbMN,  b  of  2
  1083   Gx   2 45.8   -15  20  A   Eri          14.  p eeF,  pS,  mE,  sp  of  2
I1844    Gx   2 45.8   +03  15  m   Cet   0.7    15.  p F,  pF,  E pf,  dif
  1084   Gx   2 46.0   -07  35  s   Eri   2.9    10.6   vB,  pL,  E,  gpmbM
  1077   Gx   2 46.1   +40  05  r   Per          16.  p vF,  pL,  E
  1097   Gx   2 46.3   -30  17  s   For   9.3     9.3   vB,  L,  vmE  151deg  , vbMN
  1085   Gx   2 46.4   +03  37  s   Cet   1.7    14.  p F,  S,  R,  lbM,  bet  2 st
  1087   Gx   2 46.4   -00  30  s   Cet   3.5    11.0   pB,  cL,  lE,  mbM
  1089   Gx   2 46.4   -15  04  A   Eri          14.  p eeF,  S,  R,  nf  of  2
  1090   Gx   2 46.6   -00  15  s   Cet   3.8    11.9   vF,  pL,  iR,  bM
  1088   Gx   2 47.0   +16  11  r   Ari          15.  p vF,  S,  iF
  1102   Gx   2 47.1   -22  14  r   Eri          14.  p eF,  vS,  R
I 255   Gx   2 47.1   +16  16  m   Ari   0.6    16.  p vF,  vS,  R,  *12  f  5s
  1094   Gx   2 47.5   -00  17  s   Cet   1.4    14.  p vF,  S,  R,  2 S  st  p
  1095   Gx   2 47.6   +04  38  r   Cet          14.  p eF,  pS,  R
I1846    Gx   2 47.7   +13  15  u   Ari   1.1    15.  p F,  S,  glbM
  1086   Gx   2 47.9   +41  15  r   Per          13.  p vF,  pS,  D*  nr
I1847    Gx   2 47.9   +14  30  z   Ari          16.  p F,  S,  iF,  r
  1103   Gx   2 48.0   -13  57  r   Eri          13.  p eeF,  S,  E,  *15  inv,  *11  f
I1853    Gx   2 48.0   -13  59  m   Eri   0.8    14.  p eF,  vS,  1103  f  2s  , 2'  n
  1093   Gx   2 48.2   +34  25  r   Tri          14.  p eF,  vS
I1849         2 48.2   +09  22  d   Cet               F,  vS,  R,  stell
  1101   Gx   2 48.3   +04  34  r   Cet          15.  p vF,  eS,  R,  bM,  *13  p
  1119         2 48.3   -18  01  D   Eri               F,  eS,  R  (F*?)
  1104   Gx   2 48.6   -00  16  s   Cet   1.3    15.  p vF,  vS,  r,  *14  s
  1108   Gx   2 48.6   -07  58  r   Eri               eF,  pS,  R
I1850         2 48.7   +13  14  d   Ari               F,  S,  dif
I1859    Gx   2 48.8   -31  11  m   For   1.2    14.  p pF,  pS,  R,  2nd  of  3
I1856    Gx   2 48.9   -00  46  v   Cet   1.3         F,  S,  E  200deg  , gbMN
I1852    Gx   2 49.0   +13  13  u   Ari   1.3    15.  p F,  pS,  R,  gbM
  1109   Gx   2 49.1   +13  15  r   Ari          15.  p vF
I 261         2 49.1   -14  28  F   Eri               F,  pL;  = 1120
I1858    Gx   2 49.1   -31  17  c   For   1.7         vF,  pS,  R,  1st  of  3
  1114   Gx   2 49.2   -17  00  r   Eri          13.  p pF,  pL,  pmE,  glbM
  1120   Gx   2 49.2   -14  27  r   Eri          14.  p vF,  S,  R,  bM
  1107   Gx   2 49.3   +08  06  r   Cet          14.  p F,  vS,  R
  1110   Gx   2 49.3   -07  51  t   Eri   2.7         eF,  pL,  E  348deg
I1854    Gx   2 49.3   +19  18  v   Ari               F,  vS,  R,  bMN
I1855         2 49.3   +13  22  d   Ari               F,  pL,  D ns,  biN
I1860    Gx   2 49.6   -31  11  c   For   1.9         pF,  pS,  lE,  3rd  of  3
  1111   Gx   2 49.7   +13  08  r   Ari               F,  vS,  stellar
I1857    Gx   2 49.7   +14  37  u   Ari   1.0    15.  p F,  S,  R,  glbM
I 256   Gx   2 49.8   +46  59  u   Per   2.5    14.  p cF,  lE,  S,  1st  of  3
I 258   Gx   2 49.8   +41  03  u   Per   1.7    16.  p vF,  vlbM,  *9.5  f  2'
I 257         2 49.9   +46  59  d   Per               eF,  pS,  R,  v diffic,  2nd  of  3
  1112    -   2 50.0   +13  13  r   Ari               F,  pS
  1118   Gx   2 50.0   -12  09  r   Eri          14.  p eF,  vS,  E pf
I 259         2 50.1   +41  04  d   Per               vF,  double,  dist  17"
  1113    -   2 50.2   +13  18  r   Ari               vF
  1115   Gx   2 50.5   +13  15  r   Ari          15.  p vF
  1106   Gx   2 50.6   +41  41  r   Per          13.  p vF,  vS,  vF*  att  s
  1116   Gx   2 50.6   +13  19  r   Ari          15.  p vF
I 263         2 50.6   -00  07  d   Cet               vF,  vS,  R,  N = 14m
  1121   Gx   2 50.8   -01  44  r   Eri          13.  p F,  mE
  1135   Gx   2 50.8   -54  56  c   Hor   0.8         F,  R,  gbM
  1136   Gx   2 50.9   -55  04  v   Hor   1.7         F,  R,  gbM
I 264         2 50.9   -00  10  d   Cet               vF,  eS,  R,  stellar
I 260   Gx   2 51.1   +46  57  u   Per   1.8    15.  p eeF,  pS,  2 F  st  nr,  3rd  of  3
I1848   C+N   2 51.2   +60  26  s   Cas   60.     6.5   Cl,  st F,  extends  8mag   f,  in F neby
  1117   Gx   2 51.3   +13  11  r   Ari          15.  p close  to  a  S*
  1124   Gx   2 51.6   -25  42  r   For          15.  p eF,  eS,  iR,  gbM,  *9  nf  1'
I 262   Gx   2 51.7   +42  50  u   Per   2.3    15.  p eeF,  pS,  R,  bet  2 st,  v diffic
  1125   Gx   2 51.8   -16  38  r   Eri          13.  p vF,  S,  lE,  gbM
I1851    ?   2 51.8   +58  19  x   Cas               *6.2,  neb  att  sp,  5'  l
I1862    Gx   2 52.0   -33  20  c   For   3.2         eeF,  vS,  lE,  v diffic,  *7  sf
  1105   Gx   2 52.4   -15  42  r   Eri          15.  p vF,  vS,  R
  1126   Gx   2 52.4   -01  18  r   Eri          15.  p eeF,  S,  R,  1132  f
  1128    -   2 52.6   +06  03  r   Cet               eF,  S,  lE,  2 F  st  close  p
  1133   Gx   2 52.7   -08  47  r   Eri          15.  p vF,  vS,  lE  45deg  , 2 st  np,  nf
  1122   Gx   2 52.8   +42  12  r   Per          13.  p vF,  pS,  R,  * nr  n
  1123    -   2 52.8   +42  13  r   Per               cF,  S,  iR,  vgbM,  r;  = 1122?
  1127   Gx   2 52.9   +13  15  r   Ari          15.  p vF
  1132   Gx   2 52.9   -01  16  r   Eri          14.  p eF,  pL,  gbM,  *8  f
  1139   Gx   2 52.9   -14  31  r   Eri          15.  p vF,  S,  R,  gbMN
I1864         2 53.2   -34  12  d   For               eF,  S,  R
I1861         2 53.3   +25  29  d   Ari               F,  pS,  R,  vgbM
  1134   Gx   2 53.6   +13  00  s   Ari   2.5    13.  p F,  S,  iR,  r
I 267   Gx   2 53.8   +12  50  v   Ari   2.2         vF,  pS,  dif,  1134  np
  1137   Gx   2 54.0   +02  57  r   Cet          13.  p vF,  pS,  R,  lbM
  1130   Gx   2 54.4   +41  37  r   Per          13.  p eF,  eS
  1129   Gx   2 54.5   +41  35  r   Per          14.  p cF,  pS,  iR,  vglbM,  D or F*  sp
  1131   Gx   2 54.6   +41  34  r   Per          15.  p eF,  eS
  1140   Gx   2 54.6   -10  02  s   Eri   1.4    12.5   pB,  S,  R,  stellar
  1145   Gx   2 54.6   -18  38  r   Eri          13.  p F,  pL,  pmE,  2 S  st  f
I 265   Gx   2 54.7   +41  40  z   Per          16.  p eeF,  eS,  R
I1863    Gx   2 54.9   +08  47  z   Cet          16.  p F,  vS,  R,  gbMN
I1866    Gx   2 54.9   -15  38  m   Eri   0.4    14.  p vF,  eS,  alm  stell
I 266   Gx   2 55.0   +42  14  m   Per   0.3    15.  p eF,  eS,  R
  1143   Gx   2 55.1   -00  10  s   Cet   1.1    13.5   eF,  S,  R,  p  of  2
  1141         2 55.2   +00  28  F   Cet               vF,  S,  p  of  Dneb;  prob  = 1143
  1142         2 55.2   +00  28  F   Cet               pF,  S,  R,  f  of  Dneb;  prob  = 1144
  1144   Gx   2 55.2   -00  11  s   Cet   0.9    13.3   eF,  S,  R,  f  of  2
  1147    -   2 55.3   -09  07  r   Eri               eF,  vS,  E  0deg  , *9.5  f  6'
I 268   Gx   2 55.4   -14  06  m   Eri   0.6    15.  p vF,  vS,  irr  R,  lbM
I 269   Gx   2 55.4   -14  04  m   Eri   1.0    15.  p eF,  vS,  dif
I1865    Gx   2 55.4   +08  49  u   Cet   1.6    15.  p F,  vS,  R,  gbM,  r
I 270   Gx   2 55.7   -14  12  m   Eri   1.2    14.  p pB,  vS,  R
I1867    Gx   2 55.9   +09  18  u   Cet   2.2    15.  p F,  S,  pR,  gbM
I 271   Gx   2 56.0   -12  00  m   Eri   0.8    15.  p vF,  S,  R
I 272   Gx   2 56.1   -14  11  m   Eri   0.9    15.  p vF,  S,  iF
I1868         2 56.1   +09  21  d   Cet               F,  vS,  R,  stell
  1138   Gx   2 56.5   +43  03  r   Per          14.  p vF,  vS,  R,  gbM,  2 S  st  triangle
  1181         2 57.0   -15  02  D   Eri               eF,  vS,  R,  bMN
  1148   Gx   2 57.1   -07  42  r   Eri          15.  p eF,  pS,  R,  v diffic,  np  of  2
  1150   Gx   2 57.1   -15  03  r   Eri          15.  p vF,  S,  R,  sbMN
  1151   Gx   2 57.1   -15  00  r   Eri               eF,  S,  R  (neb?),  nr  1150
  1180         2 57.1   -15  00  D   Eri               eF,  vS,  R,  bMN
I 273   Gx   2 57.1   +02  47  u   Cet   1.8    14.  p F,  pS,  lE  235deg  , bM
  1158   Gx   2 57.3   -14  23  r   Eri          15.  p eF,  S,  R,  sbMN
  1149   Gx   2 57.4   -00  18  r   Cet          15.  p vF,  vS,  R,  bM,  S*  p  30"
  1146    -   2 57.5   +46  27  r   Per               eF,  vS,  vF  + neb
  1152   Gx   2 57.6   -07  47  r   Eri          15.  p eeF,  S,  R,  v diffic,  sf  of  2,  * s
I1870    Gx   2 57.9   -02  21  t   Eri   2.9         vF,  R,  vgbM,  v diffic
  1153   Gx   2 58.1   +03  22  r   Cet          13.  p F,  vS,  ilE,  sbM,  er
  1154   Gx   2 58.1   -10  21  r   Eri          14.  p eF,  S,  lbM,  sp  of  2
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I1869   Gx   2 58.1   +05  50  z   Cet          16.  p F, eS,  like  neb  D*
 1155   Gx   2 58.2   -10  20  r   Eri          14.  p eF,  S,  lbN,  nf  of  2
 1157   Gx   2 58.2   -15  07  r   Eri               eF,  pS,  E  0deg  , sbMN
 1165   Gx   2 58.7   -32  07  v   For   3.1         vF,  pL,  E,  vlbM
I 276   Gx   2 58.7   -15  41  m   Eri   2.0   14.  p pB,  S,  mbM
 1162   Gx   2 58.9   -12  24  r   Eri         13.  p F,  R,  glbM,  stellar
 1156   Gx   2 59.7   +25  14  s   Ari   3.1   11.7   pB,  cL,  pmE  0deg  ,  bet  2  st
I 277   Gx   2 59.8   +02  46  v   Cet   1.6         pB,  pS,  R,  N  =  12.5
I 274        3 00.1   +44  13  d   Per               eeF,  pS,  R,  v  diffic
 1163   Gx   3 00.3   -17  09  v   Eri   3.4         vF,  pS,  mE  75deg
 1166   Gx   3 00.6   +11  51  r   Ari         15.  p eF,  S
 1159   Gx   3 00.7   +43  10  r   Per         14.  p vF,  S,  R,  vlbM
 1168   Gx   3 00.8   +11  47  r   Ari         15.  p eF
I 275        3 00.9   +44  21  d   Per               eeF,  pS,  R,  bet  2  st
 1160   Gx   3 01.2   +44  58  s   Per   1.6   13.  p F,  E
 1161   Gx   3 01.2   +44  55  s   Per   3.1   13.  p F,  pS,  lE,  sbM
I 279   Gx   3 01.2   +16  13  z   Ari         15.  p vF,  vS,  R,  dif
I 278   Gx   3 01.5   +37  47  u   Per   2.3   15.  p vF,  *10  p  95",  F*  12"  sp
 1172   Gx   3 01.6   -14  50  s   Eri   2.2   12.0   pF,  pL,  R,  psbM
 1167   Gx   3 01.7   +35  12  s   Per   3.1   12.3   vF,  pL,  R,  spmbM
 1164   Gx   3 01.9   +42  36  r   Per         14.  p eF,  vS
 1205        3 02.4   -09  40  D   Eri               eF,  pS,  E  25deg  ,  *9.5  3'  sp;  =  1182
 1170    -   3 02.5   +27  04  r   Ari               eL,  dif
 1179   Gx   3 02.6   -18  54  s   Eri   4.6   12.  p eF,  pS,  gbM,  *12  f  1'
 1187   Gx   3 02.6   -22  52  s   Eri   5.0   11.  p pF,  cL,  pmE,  gbM  *16,  r
 1185   Gx   3 03.0   -09  08  r   Eri         15.  p eF,  pS,  E  15deg
I1877   Gx   3 03.2   -50  31  c   Hor   3.0         eF,  vS,  E  170deg  ,  prob  neb
I 280   Ast  3 03.3   +42  21  x   Per               eF,  pS,  R
 1189   Gx   3 03.4   -15  37  r   Eri         14.  p eF,  vS,  R,  p  1209
 1195   Gx   3 03.4   -12  02  r   Eri         14.  p eF,  eS,  *12  sf,  1196  sf
 1182   Gx   3 03.5   -09  40  r   Eri               eF,  pS,  E  120deg  ,  *10  sp  2'.5
 1190   Gx   3 03.5   -15  39  r   Eri         15.  p eF,  vS,  R,  p  1209
 1196   Gx   3 03.5   -12  05  r   Eri         14.  p vF,  sp  of  2
 1169   Gx   3 03.6   +46  23  s   Per   4.4   11.7   pF,  pS,  iF,  sbM
 1191   Gx   3 03.6   -15  40  r   Eri         15.  p eF,  vS,  R,  p  1209
 1199   Gx   3 03.6   -15  37  s   Eri   2.2   11.5   cB,  pS,  iR,  smbM
 1188        3 03.7   -15  30  D   Eri               eF,  vS,  R,  p  1209
 1192   Gx   3 03.7   -15  40  r   Eri         15.  p eF,  vS,  R,  p  1209
I1878        3 03.7   -52  06  d   Hor               eeF,  eS,  cE  5deg  ,  prob  neb
 1194   Gx   3 03.8   -01  05  r   Cet         14.  p F,  S,  R,  glbN
 1200   Gx   3 03.8   -11  59  r   Eri         13.  p pF,  cL,  iR,  bM,  nf  of  2
I1873        3 03.8   +09  31  d   Cet               F,  S,  E  200deg
I 283   Gx   3 03.9   -00  12  m   Cet   0.4   15.  p pB,  eS,  R
I1875   Gx   3 03.9   -39  26  c   For   1.8         eF,  pS,  R,  FD*  sf  in  line
I1879        3 03.9   -52  06  d   Hor               eeF,  eS,  mE  135deg  ,  stell  N
 1171   Gx   3 04.0   +43  24  s   Per   3.2   13.  p vF,  pL,  iF
 1201   Gx   3 04.1   -26  04  s   For   4.4   10.6   cB,  pS,  vlE,  r,  S*  nr
I 285   Gx   3 04.1   -12  01  m   Eri   1.0   15.  p F,  vS,  dif,  1200  p
 1173    -   3 04.2   +41  22  r   Per               eF,  vS,  stellar  Nucl
 1175   Gx   3 04.5   +42  20  s   Per   2.5   12.8   F,  cL,  E
 1176    -   3 04.5   +41  23  r   Per               *13  in  vF  neb
I 281        3 04.5   +42  21  x   Per               eeF,  vS,  *  close  n,  1175  nr;  =  1177
I1876   Gx   3 04.5   -27  26  s   For   0.7   14.4   eeF,  S,  R,  F*  nr  sf
 1177   Gx   3 04.6   +42  22  r   Per         15.  p vF,  S,  R,  nf  1175;  =  IC  281
 1178    -   3 04.6   +41  18  r   Per               *13  in  vF  neb  (?)
 1204   Gx   3 04.6   -12  20  r   Eri         15.  p eF,  E  45deg  ,  r,  sev  st  inv
I1872   OC   3 04.6   +42  49  x   Per               Cl
 1183    -   3 04.7   +41  22  r   Per               *13  inv  in  neb
I 286        3 04.8   -06  29  d   Eri               vF
 1202   Gx   3 04.9   -06  29  r   Eri               eF,  S,  2  st  4'  nf
I 287        3 05.0   -12  05  d   Eri               F,  vS,  R,  stellar
 1203   Gx   3 05.2   -14  22  r   Eri         15.  p vF,  S,  R,  bMN  (neb?)
I 282        3 05.2   +41  51  d   Per               eF,  S,  R,  bet  2  st  nr
 1174        3 05.5   +42  49  D   Per               pF,  pS,  lE,  pB*  close  p;  prob  =  1186
 1186   Gx   3 05.5   +42  50  s   Per   3.3   13.  p F*  with  neb  appendages
 1193   OC   3 05.8   +44  23  s   Per   2.    13.  p F,  cL,  er
 1209   Gx   3 06.0   -15  37  s   Eri   2.6   11.4   B,  S,  cE,  psbM
 1206   Gx   3 06.1   -08  50  F   Eri               eF,  vS,  vlE  0deg
 1197    -   3 06.2   +44  04  r   Per               pF,  pS,  cE,  sev  vF  st  nr
 1198   Gx   3 06.2   +41  52  r   Per         14.  p neb  *11
 1208   Gx   3 06.2   -09  32  r   Eri         14.  p pB,  S,  lE  80deg  +/-  ,  lbN
 1217   Gx   3 06.2   -39  01  r   For               pF,  S,  R,  psbM
I 284   Gx   3 06.2   +42  23  s   Per   4.9   13.  p eeF,  pL,  lE,  D*  np,  bet  2  st
I1871    ?   3 06.4   +60  41  x   Cas   4.          *9.3  nebs,  chiefly  f
I1874   Gx   3 06.4   +36  00  m   Per   0.9   14.  p F,  vS,  vlbM,  dif
 1244   Gx   3 06.5   -66  47  c   Hor   2.0         F,  S,  pmE,  gbM
I1880   Gx   3 06.5   -09  43  m   Eri   1.0   15.  p eF,  S,  *9  f  8s
I1885   Gx   3 06.7   -32  52  c   For   1.5         vF,  vS,  mE  140deg  ,  gbM
 1210   Gx   3 06.8   -25  42  r   For         13.  p eF,  vS,  iR,  gbMN
 1211   Gx   3 06.9   -00  47  r   Cet         13.  p pB,  vS,  R,  mbMN  =  *9-10
 1214   Gx   3 06.9   -09  32  r   Eri         14.  p F,  pS,  iR,  1208  p
 1246   Gx   3 07.0   -66  56  c   Hor   1.5         pF,  S,  R,  glbM
 1215   Gx   3 07.1   -09  35  r   Eri         14.  p eF,  vS,  R
 1216   Gx   3 07.3   -09  36  r   Eri         15.  p eF,  S,  stellar,  3rd  of  3
I 291   Gx   3 07.4   -12  37  m   Eri   0.8   14.  p F,  S,  R,  bM
I 288   OC   3 07.5   +42  22  x   Per               vF,  vS,  R,  2  st  nf;  S  Cl?
I1882   Gx   3 07.8   +03  09  u   Cet   1.0   15.  p F,  pL,  E  210deg
I1886   Gx   3 08.0   -04  24  m   Eri   0.3   15.  p vF,  S,  vmbM,  *13  s  1'.2
I1896        3 08.0   -54  14  d   Hor               eeF,  eS,  cE  10deg  ,  stell  N
 1221   Gx   3 08.1   -04  15  r   Eri         15.  p eF,  vS,  E  170deg  ,  *  s
 1207   Gx   3 08.2   +38  23  r   Per         13.  p cF,  vS,  R,  psb  in  npp  end
 1228   Gx   3 08.2   -22  55  r   Eri         14.  p eF,  eS,  R,  gbM,  p  of  2
 1229   Gx   3 08.2   -22  58  s   Eri   1.9   14.  p eF,  eS,  R,  gbM,  f  of  2
 1223        3 08.3   -04  09  D   Eri               eF,  S,  R,  gbMN,  p  of  2
 1230   Gx   3 08.3   -23  00  r   Eri         15.  p *12  in  eF  neb
 1218   Gx   3 08.4   +04  07  s   Cet   1.3   12.8   pF,  pS,  R
I1892   Gx   3 08.4   -23  03  c   Eri   1.9         vF,  L,  nr  1230
 1219   Gx   3 08.5   +02  09  r   Cet         13.  p F,  pL,  R
 1212   Gx   3 08.6   +40  51  r   Per               eF,  S,  R,  Algol  nr
 1225        3 08.8   -04  06  D   Eri               eF,  vS,  R,  f  of  2
 1222   Gx   3 08.9   -02  58  s   Eri   1.3   14.  p vF*  in  pF,  S,  R  neb
 1213   Gx   3 09.2   +38  39  r   Per         15.  p eF,  lE,  *  close  n,  diffic
I1881   Gx   3 09.2   +38  38  u   Per   3.0   16.  p vF,  pS,  v  dif  (=  1213?)
 1231    -   3 09.6   -15  35  r   Eri               eF,  pL,  E  (neb?)
 1234   Gx   3 09.6   -07  51  r   Eri         15.  p eF,  S,  iR,  *  or  st  inv
I1895   Gx   3 09.6   -25  15  c   For   1.8         eeF,  pS,  2  st  close  p
I 290   Gx   3 09.7   +40  59  u   Per   1.2   15.  p eeF,  S,  R
I1883   Gx   3 09.7   +40  54  u   Per   1.1   16.  p S,  R,  vgbM
I1884        3 09.7   +40  59  d   Per               S,  E  npsf,  diffic,  *12  close  f
 1232   Gx   3 09.8   -20  35  s   Eri   7.8    9.9   pB,  cL,  R,  gbN,  r
I1890   Gx   3 10.0   +19  13  m   Ari   0.2   15.  p pB,  pL,  iF,  N,  r
 1249   Gx   3 10.1   -53  21  s   Nor   5.2   12.  p B,  L,  vmE  80deg  ,  vgbM
I1887        3 10.2   +40  45  d   Per               *12  close  sf
I1891        3 10.2   +19  36  d   Ari               vF,  S,  bM,  dif
I 289   Pl   3 10.3   +61  19  s   Cas   0.6   12.  p pB,  pL,  R,  bet  2  vF  st
I 292   Gx   3 10.3   +40  46  v   Per   1.2         eF,  pS,  R,  *  s,  bet  2  st
I1893        3 10.3   +19  37  d   Ari               ef,  vS,  diffic
I1898   Gx   3 10.3   -22  24  c   Eri   3.2         neb  line  at  60deg  ,  susp
 1252        3 10.5   -58  08  r   Hor               Cl  of  18  or  20  st
I1894   Gx   3 10.5   +19  36  z   Ari         16.  p F,  S,  vlbM,  dif
 1237   D*   3 10.7   -08  40  F   Eri               vF,  S,  E  170deg  ;  D*?
I1897   Gx   3 10.8   -10  49  m   Eri   0.5   14.  p eF,  vS,  nr  1238
 1238   Gx   3 10.9   -10  45  r   Eri         14.  p vF,  pS,  R,  1247  nf
I 293   Gx   3 10.9   +41  07  m   Per   0.2   15.  p eF,  S,  R
I 294        3 10.9   +40  38  d   Per               vF,  pS,  irr  R
 1239   Gx   3 11.0   -02  31  r   Eri         15.  p eF,  stellar  (RA  30s   greater?)
I 295        3 11.0   +40  37  d   Per               eF,  pS,  R
I 299        3 11.0   -13  07  d   Eri               vF,  vS,  R,  lbM
I1888        3 11.0   +41  08  d   Per               vF,  S
I1889        3 11.0   +40  37  d   Per               F,  R,  vgbM
 1226   Gx   3 11.1   +35  24  r   Per         14.  p F,  vS,  R,  bM

I 296   Gx   3 11.1   +40  37  u   Per   2.8   16.  p eF,  pS,  irr  R,  F  D*  p
 1227   Gx   3 11.2   +35  20  r   Per         15.  p vF,  vS
 1224   Gx   3 11.3   +41  22  s   Per   1.7   16.  p eF,  vS,  R
 1241   Gx   3 11.3   -08  55  s   Eri   3.0   13.  p F,  pL,  R,  vglbM,  *9  n
 1242   Gx   3 11.3   -08  54  s   Eri   1.3   14.  p vF,  S
I 298   Gx   3 11.3   +01  19  v   Cet               F,  pL,  2  B  points  inv
 1243   Gx   3 11.4   -08  57  h   Eri   0.4   14.  p F,  vS,  R
 1236   Gx   3 11.6   +10  49  r   Ari         15.  p eF,  vS,  R
 1220   OC   3 11.7   +53  20  s   Per   2.    12.  p Cl,  vS,  st  vF
I1899        3 11.8   -25  19  d   For               eeF,  S,  R,  2  F  st  sp  in  line
 1247   Gx   3 12.2   -10  29  s   Eri   3.6   13.  p F,  pL,  E  80deg
 1261   Gb   3 12.3   -55  13  s   Hor   6.9    8.4   glob.  cl.  ,  B,  L,  R,  rr
 1233   Gx   3 12.5   +39  19  s   Per   2.1   13.2   F,  vS,  R,  diff
I 303        3 12.7   -11  42  d   Eri               eF,  eS,  stellar
 1235   ***  3 12.8   +38  56  r   Per               vF,  S,  lE
 1248   Gx   3 12.8   -05  13  s   Eri   1.3   14.  p cF,  S,  lE,  bM,  *9  n  5'
I 302   Gx   3 12.8   +04  42  v   Cet   2.1         pF,  pS,  R,  vsN
 1240    *   3 12.9   +30  34  r   Ari               eF,  vS;  vS  st?
I 306        3 13.0   -11  43  d   Eri               eF,  S,  R,  diffic
I1903        3 13.1   -50  36  d   Hor               2  F  neb,  E
I 297   D*   3 13.3   +42  06  x   Per               eeF,  pS,  R,  v  diffic,  F*  sp
 1255   Gx   3 13.5   -25  44  s   For   4.1   11.1   F,  pL,  F*  close  p
I 307   Gx   3 13.8   -00  13  u   Cet   1.9   15.  p pB,  vS,  r
 1256   Gx   3 13.9   -21  58  r   Eri         14.  p F,  S,  E,  alm  stell,  *8  np
 1258   Gx   3 13.9   -21  45  r   Eri         13.  p eF,  pS,  vlE,  12'  n  of  1256
 1251   D*   3 14.1   +01  28  F   Cet               F
 1253   Gx   3 14.1   -02  49  s   Eri   4.8   12.  p *12  with  neb  f,  90"  l
I 300   Gx   3 14.3   +42  25  x   Per               eF,  S,  R,  *9  sp,  np  of  2
 1254   Gx   3 14.4   +02  42  r   Cet         15.  p F,  vS,  stellar
 1245   OC   3 14.7   +47  15  s   Per   10.     8.4   Cl,  pL,  Ri,  C,  iR,  st  12...15
I 301   Gx   3 14.8   +42  13  x   Per               eF,  pS,  R,  sf  of  2
I 304   Gx   3 15.0   +37  54  u   Per   1.3   15.  p vF,  *  76"  sf,  np  of  2
I1904   Gx   3 15.0   -30  43  c   For   1.8         eF,  vS,  mE  80deg  ,  stell  N
I 305   Gx   3 15.1   +37  51  m   Per   1.0   15.  p vF,  *  49"  nf
I1908   Gx   3 15.1   -54  49  c   Hor   1.6         vF,  vS,  spir  branch
 1250   Gx   3 15.4   +41  21  s   Per   2.7   14.  p vF,  vS,  R
 1262   Gx   3 15.7   -15  52  r   Eri         14.  p eF,  pS,  iR,  sbMN
 1263   Gx   3 15.8   -15  06  r   Eri         15.  p vF,  S,  lE,  sbM
 1266   Gx   3 16.0   -02  24  r   Eri         14.  p vF,  pS,  *13  sp  2'
I1900   Gx   3 16.0   +37  08  m   Per   0.6   15.  p F,  S,  pR,  gbMN
I 309   Gx   3 16.1   +40  48  v   Per   1.0         eeF,  pS,  R,  bet  2  st
I1901        3 16.1   +37  07  d   Per               F,  vS,  R,  gbMN
I1906   Gx   3 16.1   -34  22  c   For   1.5         vF,  vS,  vmE  60deg  ,  gbM
I1902   Gx   3 16.2   +37  11  z   Per         16.  p F,  vS,  R,  sbM  *14
I 308   Gx   3 16.3   +41  11  x   Per               eF,  pS,  iR,  r?
 1257   Gx   3 16.4   +41  31  r   Per         14.  p stellar  neb
 1184   Gx   3 16.6   +80  48  s   Cep   3.0   13.  p F,  pL,  mE
I 310   Gx   3 16.7   +41  20  v   Per   1.6         vF,  pS,  R,  1259  and  1260  near
I 311   Gx   3 16.8   +40  01  u   Per   1.9   16.  p eF,  pS,  iR,  bet  2  st,  vF*  v  close  f
I1912        3 16.8   -50  39  d   Hor               S,  E  ns
 1259   Gx   3 17.0   +41  21  r   Per         15.  p vF,  S,  R,  vlbM
 1288   Gx   3 17.2   -32  35  s   For   2.3   12.1   vF,  L,  R,  vglbM,  cE  ns
 1269        3 17.3   -41  06  c   Eri               vB,  R,  gmbM;  =  1291
 1291   Gx   3 17.3   -41  08  s   Eri   10.5    8.5   glob.  cl.  ,  vB,  pL,  R,  mbM,  er
I1909   Gx   3 17.3   -33  41  c   For   1.3         vF,  vS,  cE  45deg  ,  stell  N
 1260   Gx   3 17.5   +41  24  s   Per   1.7   14.  p vF,  S,  R
 1284   Gx   3 17.6   -10  18  r   Eri         14.  p eF,  vS,  2  st  s
 1285   Gx   3 17.8   -07  20  r   Eri         14.  p pF,  S
 1286   Gx   3 17.8   -07  39  r   Eri         15.  p eF,  eS,  R,  4  B  st  s
 1264   Gx   3 17.9   +41  26  r   Per         15.  p vF,  S,  vlbM
 1280   Gx   3 18.0   -00  10  r   Cet         14.  p vF,  vS,  R,  gbM,  r
I1910        3 18.0   -21  26  d   Eri               2  eF,  eS,  neb  susp
I 312   Gx   3 18.1   +41  45  v   Per   1.5         eeF,  pS,  R,  nearly  bet  2  st
 1292   Gx   3 18.2   -27  37  s   For   3.2   13.  p F,  pS,  lE,  vgbM,  S  D*  nr
 1265   Gx   3 18.3   +41  52  s   Per   2.1   15.  p vF,  vS,  mbM
 1313   Gx   3 18.3   -66  30  s   Ret   8.5    9.  p pB,  L,  E,  vgbM,  r
 1287   Gx   3 18.6   -02  45  r   Eri               vF,  vS,  iR
 1267   Gx   3 18.7   +41  28  s   Per   1.4   15.  p F,  vS,  R,  stell
 1268   Gx   3 18.8   +41  29  s   Per   1.2   15.  p eF,  S,  lE,  com
I 314   Gx   3 18.8   -01  58  u   Eri   2.1   14.  p *13  in  vF,  S  neb
I1905   ***  3 18.8   +41  22  x   Per               Cl,  S,  vF;  neb?
 1289   Gx   3 18.9   -01  59  r   Eri         14.  p vF,  S,  R,  4  st  f;  =  IC  314
 1296   Gx   3 18.9   -13  04  r   Eri         14.  p eF,  vS,  R
 1270   Gx   3 19.0   +41  28  s   Per   1.1   12.9   vF,  S,  R
I 317   Gx   3 19.0   -12  45  m   Eri   0.8   14.  p vF,  pL,  R
I 315   Gx   3 19.1   +04  02  z   Cet         15.  p vF,  S,  dif,  vlbM
 1271   Gx   3 19.2   +41  21  s   Per         16.  p vF,  vS
 1297   Gx   3 19.2   -19  06  s   Eri   2.3   13.  p F,  pS
 1272   Gx   3 19.3   +41  29  s   Per   2.5   15.  p F,  S,  R
 1273   Gx   3 19.4   +41  32  s   Per   1.4   12.9   vF,  vS
 1290        3 19.4   -13  59  D   Eri               eF,  eS
I1914   Gx   3 19.4   -49  36  c   Hor   3.8         spiral?
I1913   Gx   3 19.6   -32  28  c   For   1.7         vF,  vS,  mE  155deg  ,  cbM
 1274   Gx   3 19.7   +41  33  s   Per   0.6   15.  p vF,  vS
 1300   Gx   3 19.7   -19  25  s   Eri   6.5   10.4   cB,  vL,  vmE,  psvmbM
I1915        3 19.7   -50  42  d   Hor               E  ns
 1275   Gx   3 19.8   +41  31  s   Per   2.6   11.6   F,  S
 1277   Gx   3 19.8   +41  34  s   Per   0.8   13.5   vF,  vS,  np  1278
 1276   Gx   3 19.9   +41  33  r   Per               vF,  vS
 1278   Gx   3 19.9   +41  33  s   Per   1.7   12.6   pB,  pS,  R,  bM
 1302   Gx   3 19.9   -26  04  s   For   4.4   11.  p S,  R,  psvmbM,  *9  np  1'
I1907   Gx   3 19.9   +41  33  x   Per               vF,  S,  vmbM
 1279   Gx   3 20.1   +41  28  r   Per               vF,  vS
 1281   Gx   3 20.1   +41  38  s   Per   0.7   13.5   vF,  S,  *11  p  1'
 1295        3 20.1   -14  00  D   Eri               eF,  vS,  gbMN,  *10  f  3'
 1299   Gx   3 20.1   -06  17  r   Eri         14.  p vF,  S,  vlE,  gbM,  er
 1311   Gx   3 20.1   -52  10  r   Hor               F,  pL,  mE  37deg  ,  gbM
 1282   Gx   3 20.2   +41  22  s   Per   1.7   14.  p vF,  S,  lbMN
 1298   Gx   3 20.2   -02  06  s   Eri   1.5   14.  p F,  pS,  R,  *13  sp
 1283   Gx   3 20.3   +41  24  s   Per   1.3   16.  p vF,  S,  vlbM
I1916        3 20.3   -49  03  d   Hor               F,  S,  R,  2  st  sp
 1301   Gx   3 20.5   -18  45  r   Eri         13.  p vF,  mE  135deg
 1303   Gx   3 20.7   -07  25  r   Eri         15.  p vF,  sev  st  inv
I 318   Gx   3 20.8   -14  34  m   Eri   0.8   14.  p F,  S,  dif,  lbM
I1911        3 20.8   +35  18  d   Per               neb,  not  well  seen
 1304   Gx   3 21.0   -04  35  r   Eri         14.  p eF,  vS
 1306   Gx   3 21.0   -25  31  c   For   1.4         vF,  vS,  gbM,  *10.5  f  4'
 1310   Gx   3 21.0   -37  08  s   For   2.3         glob.  cl.  ,  vF,  pL,  R,  vgvlbM
I 313   Gx   3 21.0   +41  54  v   Per   1.6         eeF,  vS,  R,  close  D*  nr  s
 1305   Gx   3 21.4   -02  19  s   Eri   1.9   15.  p pB,  pS,  R,  *16  att
I 316   Gx   3 21.4   +41  56  x   Per               eeF,  pS,  R
 1293   Gx   3 21.6   +41  24  s   Per   1.1   15.  p vF,  R,  bM,  np  of  2
 1294   Gx   3 21.7   +41  22  s   Per   1.8   13.1   vF,  R,  bM,  sf  of  2
 1309   Gx   3 22.1   -15  24  s   Eri   2.3   11.6   cB,  cL,  iR,  gbM,  *8  sp  4'
 1307    -   3 22.2   -04  33  r   Eri               eF,  vS,  R,  *9.5  nf
I1917        3 22.2   -53  12  d   Hor               E  ns
 1308   Gx   3 22.5   -02  45  r   Eri         15.  p eF,  S,  iF,  am  3  or  4  st
 1314   Gx   3 22.6   -04  11  r   Eri         15.  p *10  with  eF,  cL,  E  neb  s
 1316   Gx   3 22.7   -37  12  s   For   7.1    8.9   vB,  cL,  vlE,  vsvmbMN
 1317   Gx   3 22.8   -37  06  s   For   3.2   11.0   pB,  pS,  psbM
 1318    -   3 22.8   -37  07  r   For               F;  =  1317
 1315   Gx   3 23.1   -21  23  s   Eri   1.8   13.  p pB,  S,  R,  gbM
I 319   Gx   3 23.4   +41  24  x   Per               stellar,   =  13m
 1312   D*   3 23.7   +01  11  F   Tau               F
 1319   Gx   3 23.9   -21  32  s   Eri   1.3   14.  p F,  S,  R,  bM,  p  of  2
 1326   Gx   3 23.9   -36  28  s   For   4.0   10.5   PN  ?  pS,  vsvmbMN
I1920        3 24.2   -52  43  d   Hor               stellar
 1325   Gx   3 24.4   -21  33  s   Eri   4.6   11.6   F,  mE  239deg  ,  com,  *9.5  att
I 321   Gx   3 24.5   -15  00  m   Eri   0.4   15.  p pB,  vS,  R
 1327    -   3 24.7   -25  40  r   For               eF,  vS,  3  vF  st  close  (no  neb)
I1921        3 24.7   -50  42  d   Hor               stellar
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I1922       3 24.7   -50  44  d  Hor                  stellar
 1320   Gx  3 24.8   -03  01  s  Eri    1.9   14.  p  F, S, R, bM
I1923       3 24.8   -50  34  d  Hor                  stellar
 1321   Gx  3 24.9   -03  00  r  Eri          14.  p  F, S, E pf,  D or biN
 1322   Gx  3 25.0   -02  54  r  Eri          15.  p  vF,  vS,  R,  bM
 1323   Gx  3 25.0   -02  49  r  Eri                  eF,  eS,  *13  sp  25"  +/-
 1324   Gx  3 25.0   -05  45  r  Eri          14.  p  vF,  pS,  pmE
I1924       3 25.0   -51  41  d  Hor                  E,  stellar
I1926       3 25.2   -51  41  d  Hor                  E,  stell
I1927       3 25.2   -51  43  d  Hor                  vF
I1925       3 25.3   -51  15  d  Hor                  E  npsf,  stell
I1929       3 25.5   -51  15  d  Hor                  E  npsf
 1328   Gx  3 25.6   -04  08  r  Eri                  vF,  eS,  R,  bMN
I1933   Gx  3 25.7   -52  47  s  Hor    2.5   13.  p  lE  spnf
 1329   Gx  3 25.9   -17  37  r  Eri          14.  p  F,  pS,  R,  glbM
I 322   Gx  3 25.9   +03  40  z  Tau          15.  p  vF,  pL,  vlbM,  diffic
I1932       3 25.9   -51  20  d  Hor                  E  ns
I 320   Gx  3 26.0   +40  47  x  Per                  eF,  pS,  R,  vF*  close  p
I1919   Gx  3 26.0   -32  54  c  For    2.0           eF,  pS,  lE,  sev  st  n
I1918   Gx  3 26.2   +04  32  z  Tau          15.  p  F,  S,  glbM,  dif
I1935   Gx  3 26.2   -50  01  c  Hor    1.3           stell,  E,  spir?
 1332   Gx  3 26.3   -21  20  s  Eri    4.6   10.3   vB,  S,  E  114deg  ,  smbMN
I1936       3 26.4   -51  19  d  Hor                  stell,  E  npsf
 1331   Gx  3 26.5   -21  21  s  Eri    1.1   14.  p  vF,  vS;  = IC  324
I 324   Gx  3 26.5   -21  21  c  Eri    0.9           F,  pS,  dif,  bM;  = 1331
 1336   Gx  3 26.6   -35  44  r  For                  vF,  S,  vlE,  gbM
I1937       3 26.8   -48  42  d  Hor                  vF,  vS,  R,  bM
I1938       3 27.2   -53  01  d  Hor                  perhaps  D*
I1928   Gx  3 27.5   -21  34  c  Eri    1.5           vF,  vS,  mE  20deg  ,  cbM
I1940       3 27.7   -52  08  d  Hor                  bM
I1939       3 27.8   -51  04  d  Hor                  E  pf
 1341   Gx  3 28.0   -37  09  s  For    1.6   13.  p  F,  S,  mE  140deg  ,  *12  sf
I1942       3 28.0   -52  40  d  Hor                  stell,  E  ns
 1337   Gx  3 28.1   -08  23  s  Eri    6.8   11.7   eF,  vL,  mE  ns
 1339   Gx  3 28.1   -32  17  s  For    2.3   13.  p  cB,  pS,  R,  psbM,  D*  p
 1340    -  3 28.3   -30  54  D  For                  nonexistent;  = 1344
 1344   Gx  3 28.3   -31  04  s  For    3.9   10.3   cB,  pL,  iR,  vgbM
I1930       3 28.8   +04  24  d  Tau                  F,  S,  R,  gbM,  *8  p  3s  ,  s  1'.6
I1931   Gx  3 28.8   +01  43  m  Tau    0.8   14.  p  vF,  dif
 1338   Gx  3 29.0   -12  10  r  Eri          13.  p  vF,  S,  iR,  lbM,  r
 1330   Gx  3 29.3   +41  22  r  Per          15.  p  vF  st  in  vF,  S  neb
 1333   Nb  3 29.3   +31  25  s  Per    9.            F,  L,  *10  nf
I1945       3 29.3   -52  38  d  Hor                  stell
 1345   Gx  3 29.4   -17  48  s  Eri    1.4   13.7   vF,  S,  R,  pslbM
I1946       3 29.4   -52  37  d  Hor                  stell
I 323       3 29.5   +41  52  d  Per                  eF,  pS,  R,  p  of  2
 1347   Gx  3 29.7   -22  16  r  Eri          13.  p  eF,  pS,  E  130deg  ,  sbMN
I1944       3 29.7   -48  00  d  Hor                  eF,  eS,  lE  20deg
 1334   Gx  3 30.1   +41  50  r  Per          15.  p  eF,  pL,  lbM
 1346   Gx  3 30.1   -05  33  r  Eri          15.  p  eF,  eS,  R,  bM,  *13  p
 1335   Gx  3 30.4   +41  35  r  Per          15.  p  vF  *  in  vF,  eS  neb
 1351   Gx  3 30.5   -34  52  s  For    1.8   13.  p  pB,  pS,  R,  psbM
I1947       3 30.6   -50  19  d  Hor                  stell
 1356   Gx  3 30.7   -50  17  r  Hor                  vF,  pL,  iR,  gbM,  *  nr
I 326   Gx  3 30.7   -14  26  m  Eri    0.4   15.  p  vF,  pL,  E  ns
I 325       3 30.8   -07  03  d  Eri                  vF,  S,  R,  vlbM
I1948       3 30.9   -47  58  d  Hor                  eeF,  S,  R
I1949       3 31.0   -47  59  d  Hor                  cF,  vS,  spir,  cbM
 1350   Gx  3 31.1   -33  38  s  For    4.3   10.5   B,  L,  mE,  vmbMRN
I 327   Gx  3 31.1   -14  43  m  Eri    0.6   15.  p  eF,  vS,  dif,  v  diffic
I1950   Gx  3 31.1   -50  26  c  Hor    1.3           E  npsf
I1951       3 31.1   -53  08  d  Hor                  E  spnf
I 328   Gx  3 31.2   -14  40  m  Eri    0.5   14.  p  vF,  eS,  R
 1349   Gx  3 31.4   +04  22  r  Tau          15.  p  eeF,  S,  R,  bet  2  st
I1934   Gx  3 31.4   +42  48  u  Per    1.3   16.  p  eF,  pS,  lbM,  *12  dist  34"
I1955       3 31.4   -57  13  d  Ret                  eF,  vS,  R
 1352   Gx  3 31.5   -19  16  r  Eri          15.  p  eF,  pslbM,  diff,  *8  sf
 1342   OC  3 31.6   +37  20  s  Per   14.     6.7   Cl,  vL,  ab  60  st
I1954   Gx  3 31.6   -51  55  s  Hor    3.6   12.  p  F,  pL,  R,  spir
 1353   Gx  3 32.1   -20  49  s  Eri    3.4   11.4   pB,  cL,  iE,  mbM
I 329   Gx  3 32.1   +00  16  z  Tau          15.  p  F,  vS,  R,  lbM
I 330   Gx  3 32.2   +00  21  u  Tau    1.0   15.  p  F,  vS,  R,  lbM
I1941       3 32.2   +24  26  d  Tau                  vF,  S,  vmE  0deg   (prob  neb)
I1957       3 32.2   -52  27  d  Hor                  E  spnf
 1354   Gx  3 32.4   -15  13  r  Eri          14.  p  vF,  S,  lE,  glbM
I 331   Gx  3 32.4   +00  17  z  Tau          15.  p  *13  in  neb
I1960   Gx  3 32.6   -57  12  c  Ret    1.2           eF,  eS,  R
I 332   Gx  3 32.7   +01  23  z  Tau          15.  p  F,  vS,  R,  sbM
I1958       3 32.8   -51  27  d  Hor                  stell
 1357   Gx  3 33.2   -13  40  t  Eri    2.4   13.  p  pF,  pL,  R,  lbM,  *9  nf
I1959   Gx  3 33.2   -50  25  c  Hor    2.5           E  npsf
I1965   Gx  3 33.2   -56  33  c  Ret    1.3           eF,  vS,  R,  cbM
 1360   Pl  3 33.3   -25  51  s  For    6.5           *8  in  B,  L  neb,  E  ns
 1355   Gx  3 33.4   -05  00  s  Eri    1.8   13.1   pF,  S
I1952   Gx  3 33.4   -23  43  c  Eri    2.4           cF,  S,  vmE  140deg  ,  *  1'  sf
 1365   Gx  3 33.6   -36  08  s  For    9.8    9.5   !!  vB,  vL,  mE,  rN
I1961       3 33.6   -48  57  d  Hor                  eF,  vS,  cE  20deg
I1964       3 33.6   -53  10  d  Ret                  E  pf
 1358   Gx  3 33.7   -05  05  s  Eri    2.8   12.1   vF,  S,  bet  2  st
I1953   Gx  3 33.7   -21  29  s  Eri    2.8   12.  p  vF,  cL,  spir  or  annular
 1348   OC  3 33.8   +51  26  r  Per                  Cl,  lRi,  st  L
 1359   Gx  3 33.8   -19  29  s  Eri    1.9   12.2   F,  L,  R,  vglbM
 1362   Gx  3 33.8   -20  17  r  Eri          14.  p  vF,  S,  R
 1366   Gx  3 33.9   -31  12  s  For    2.7   13.  p  vF,  S,  iF,  lbM
I 333       3 34.0   -05  07  d  Eri                  eF,  *8.8  nf  4'
 1369    -  3 34.1   -36  17  r  For                  F
I1966       3 34.1   -51  19  d  Hor                  stell
 1361   Gx  3 34.2   -06  15  r  Eri                  eF,  eS,  gbMN
 1367    -  3 34.7   -24  56  r  For                  vF;  = 1371
I1968       3 34.7   -50  38  d  Hor                  stell
 1363   Gx  3 34.8   -09  50  r  Eri                  vF,  S,  R,  *7  sp  3'.5,  sp  of  2
 1364   Gx  3 35.0   -09  50  r  Eri                  vF,  S,  vlE,  nf  of  2
 1368   Gx  3 35.0   -15  38  r  Eri          15.  p  vF,  vS,  R,  lbM
 1371   Gx  3 35.0   -24  56  s  For    5.4   11.  p  pB,  pL,  vlE,  psbM
 1373   Gx  3 35.1   -35  11  r  For                  eF,  vS,  p  of  3
 1370   Gx  3 35.2   -20  22  r  Eri          14.  p  vF,  S,  R,  bet  2  st  14
 1375   Gx  3 35.2   -35  16  s  For    1.9           B,  S,  lE,  pmbM,  3rd  of  3
 1374   Gx  3 35.3   -35  14  s  For    1.8   12.  p  vB,  pL,  lE,  gmbM,  2nd  of  3
I 335   Gx  3 35.5   -34  27  c  For    3.0           pF,  pS,  eE  pf
I1963   Gx  3 35.5   -34  27  c  For    3.0           pB,  S,  eE  90deg  ;  = IC  335
I1956   Gx  3 35.6   +05  05  u  Tau    1.4   16.  p  F,  S,  E  200deg  ,  2  vF  Nuclei
I1962   Gx  3 35.6   -21  17  c  Eri    2.3           eF,  S,  mE  175deg  ,  gbM
 1378   D*  3 35.9   -35  12  r  For                  F
I1971       3 36.0   -52  38  d  Hor                  E  pf
 1379   Gx  3 36.1   -35  27  s  For    2.0   12.  p  glob.  cl.  ,  B,  pL,  R,  gpmbM
I1969       3 36.2   -45  11  d  Hor                  eF,  vS,  cE  50deg  ,  cbM
I1972       3 36.4   -52  01  d  Hor                  E
I1973       3 36.4   -51  59  d  Hor                  E
 1380   Gx  3 36.5   -34  59  s  For    4.9   11.  p  vB,  L,  R,  psbM
I1970   Gx  3 36.5   -43  57  c  Hor    3.3           eF,  vS,  eE  75deg
 1381   Gx  3 36.6   -35  18  s  For    2.9   12.  p  F
 1377   Gx  3 36.7   -20  54  r  Eri          14.  p  F,  S,  R,  gbM
I1974       3 36.7   -49  34  d  Hor                  E  npsf
I1979       3 36.7   -57  56  d  Ret                  eeF,  eS,  vmE  20deg
 1392   Gx  3 36.8   -36  16  r  Eri                  vF,  pS,  R
 1386   Gx  3 36.9   -36  00  s  Eri    3.5   12.  p  F
 1372   Gx  3 37.0   -15  53  r  Eri                  vF,  vS,  R,  glbM
 1387   Gx  3 37.0   -35  31  s  For    2.4   12.  p  glob.  cl.  ,  vB,  pL,  R,  gmbM
I1980   Gx  3 37.0   -57  58  c  Ret    1.2           eF,  cS,  vmE  25deg
 1376   Gx  3 37.1   -05  03  s  Eri    2.0   13.  p  eF,  pL,  iR,  bM,  r
 1382   Gx  3 37.1   -35  12  c  For    2.1           F

I 337       3 37.1   -06  43  d  Eri                  eeF,  pL,  3  st  nr
I1978   Gx  3 37.1   -50  09  c  Hor    1.2           E  ns
 1389   Gx  3 37.2   -35  45  s  Eri    2.1   13.  p  F
I1976       3 37.2   -47  26  d  Hor                  eF,  eS,  R
 1385   Gx  3 37.5   -24  30  s  For    3.0   11.2   pB,  pS,  R,  gpmbM
 1383   Gx  3 37.6   -18  20  r  Eri          14.  p  pF,  S,  R,  psmbM
I 338   Gx  3 37.6   +03  08  z  Tau          15.  p  vF,  S,  dif,  vF*  close
I1967   Gx  3 37.7   +03  17  m  Tau    0.8   14.  p  vF,  S,  R,  *13  nr
I1982   Gx  3 37.7   -57  47  c  Ret    1.4           cF,  eS,  R
 1343   Gx  3 37.8   +72  34  s  Cas    2.8   12.3   F,  vS,  iR,  gbM,  D*  vnr
 1390   Gx  3 37.9   -19  00  r  Eri          15.  p  vF,  pS,  E  260deg
 1396    -  3 38.1   -35  40  r  Eri                  F
I 339    *  3 38.1   -18  23  x  Eri                  eF,  eS,  stell  N
I 336       3 38.2   +23  28  d  Tau                  vF,  eeL,  v  dif
 1388   Gx  3 38.3   -15  53  r  Eri                  vF,  vS,  R,  lbM
 1391        3 38.5   -18  21  D  Eri                  eF,  S,  R,  gbMN
 1395   Gx  3 38.5   -23  02  s  Eri    3.2   11.  p  B,  pS,  E,  psmbM
 1399   Gx  3 38.5   -35  27  s  For    3.2    9.9   glob.  cl.  ,  vB,  pL,  psbM,  rr
 1393   Gx  3 38.6   -18  26  s  Eri    1.8   14.  p  F,  S,  R,  glbM
I1943   Gx  3 38.7   -44  06  c  Hor    2.1           pB,  S,  R;  = 1411
 1411   Gx  3 38.8   -44  05  s  Hor    2.8   12.  p  B,  pS,  R,  smbM
 1398   Gx  3 38.9   -26  20  s  For    6.6    9.7   cB,  cL,  R,  vmbM
 1404   Gx  3 38.9   -35  35  s  For    2.5   10.3   vB,  pL,  R,  psmbM
 1394   Gx  3 39.1   -18  17  s  Eri    1.5   14.  p  vF,  vS,  E  170deg  ,  sbMN
I1975       3 39.1   -15  30  d  Eri                  eF,  vS,  v  diffic,  nr  1405
 1384   Gx  3 39.2   +15  50  r  Tau          15.  p  neb  *13
 1403   Gx  3 39.3   -22  23  r  Eri          14.  p  vF,  eS,  neb*
 1401   Gx  3 39.4   -22  44  s  Eri    2.8   13.  p  vF,  vS,  R
 1402   Gx  3 39.4   -18  31  r  Eri          15.  p  eF,  vS,  R
 1406   Gx  3 39.4   -31  19  s  For    3.9   13.  p  F,  cL,  vmE,  vglbM,  *7  np
 1408    -  3 39.4   -35  31  r  For                  F
 1400   Gx  3 39.5   -18  41  s  Eri    1.9   11.1   cB,  pS,  R,  psmbM
I 340   Gx  3 39.5   -13  07  m  Eri    1.4   15.  p  F,  pS,  E  pf,  *14  at  end
 1397   Gx  3 39.6   -04  40  r  Eri          14.  p  vF,  vS,  lE
I1984       3 39.9   -47  05  d  Hor                  eeF,  eS,  mE  150deg
I 343   Gx  3 40.1   -18  27  c  Eri    1.8           eF,  vS,  lE  90deg  ,  dif
 1405   Gx  3 40.2   -15  30  r  Eri          16.  p  eF,  pL,  mE  150deg  ,  glbM,  F  st  inv
 1407   Gx  3 40.2   -18  35  s  Eri    2.5    9.8   vB,  L,  R,  svmbMN
I1987   Gx  3 40.2   -55  03  c  Ret    1.5           eF,  vS,  R
 1413   Gx  3 40.3   -15  35  r  Eri                  eF,  vS,  R,  lbM
I1981   Gx  3 40.5   -26  52  c  For    1.9           eF,  eS,  lE,  *  close  nf;  = 1412
 1412    -  3 40.6   -26  13  r  For                  F,  S,  E,  gbM,  *  sf  2'
 1419   Gx  3 40.6   -37  31  r  Eri                  pF,  pS,  R,  psbM
I1986       3 40.6   -45  22  d  Hor                  eF,  eS,  cE  135deg
I1977   Gx  3 40.8   +17  45  u  Tau    1.7   15.  p  F,  S,  R,  dif,  *13.5  nr
I1983   Gx  3 40.9   -22  34  c  Eri    4.0           vF,  pS,  R
 1415   Gx  3 41.0   -22  34  s  Eri    3.6   12.  p  pB,  S,  lE,  pglbM,  *  sf
 1416   Gx  3 41.0   -22  43  s  Eri    1.5   14.  p  eF,  S,  R,  *8.6  n  2'
 1409   Gx  3 41.2   -01  17  s  Tau    1.3   15.  p  eF,  stellar  or  lE
 1410   Gx  3 41.2   -01  17  v  Tau                  makes  Dneb  with  1409,  pos  0deg
I 341       3 41.2   +21  57  d  Tau                  vF,  eeL,  v  dif
I 345   Gx  3 41.2   -18  19  m  Eri    0.4   15.  p  eF,  vS,  iR,  gbM
 1414        3 41.5   -21  41  D  Eri                  eF,  pS,  mE  0deg  ,  bMN
 1422   Gx  3 41.5   -21  41  s  Eri    2.1   13.  p  eF,  pS,  E  80deg
I 344   Gx  3 41.5   -04  39  x  Eri                  eeF,  pL,  R,  1417  f
I 346   Gx  3 41.7   -18  16  c  Eri    1.9           eF,  pL,  E  80deg  ,  dif
I1989   Gx  3 41.9   -50  57  c  Hor    1.2           stell
 1417   Gx  3 42.0   -04  42  s  Eri    2.8   12.0   pF,  pL,  lE,  lbM,  *  sf
 1433   Gx  3 42.0   -47  13  s  Hor    6.8   10.0   vB,  L,  pmE,  vsvmbM  *10
 1425   Gx  3 42.2   -29  54  s  For    5.4   12.  p  F,  pL,  iR,  gbM
 1418   Gx  3 42.3   -04  44  s  Eri    1.5   15.  p  vF,  S,  E,  *11  sf  1'
 1427   Gx  3 42.3   -35  25  s  For    2.8   12.  p  pF,  S,  R,  psmbM
 1428   Gx  3 42.4   -35  10  s  For    1.8           F
 1421   Gx  3 42.5   -13  29  s  Eri    3.6   11.4   F,  cL,  mE  0deg  ,  r
I 347   Gx  3 42.5   -04  17  m  Eri    0.7   13.  p  eF,  vS,  R,  stellar
 1423   Gx  3 42.6   -06  22  r  Eri          15.  p  eeF,  S,  R,  v  diffic
 1420   ***  3 42.7   -05  51  F  Eri                  F,  vS,  *13  p
 1426   Gx  3 42.8   -22  07  s  Eri    2.1   11.4   pF,  S,  lE,  bM
I1988       3 42.8   -39  53  d  Eri                  eF,  pL,  R,  2  st  nr  f,  2  st  np
 1424   Gx  3 43.2   -04  44  s  Eri    2.1   15.  p  vF,  *10-  11  np
 1430    -  3 43.4   -18  14  r  Eri                  eF,  S,  E  20deg  ,  sbMN
 1436   Gx  3 43.6   -35  51  c  Eri                  glob.  cl.  ,  vB,  pmE,  pgbM;  = 1437
 1437   Gx  3 43.6   -35  52  s  Eri    2.9   12.  p  F,  vL,  R,  glbM
 1429    *  3 44.0   -04  43  r  Eri                  eF,  vS,  E  0deg  ,  gbMN,  f  of  2
 1434    -  3 44.4   -09  41  r  Eri                  eF,  S,  R,  *8.5  f  25s  ,  n  3'
 1448   Gx  3 44.5   -44  39  s  Hor    8.1   11.  p  pB,  L,  vmE  222deg  ;  =  1457
 1457   Gx  3 44.5   -44  38  D  Hor                  pF,  pL,  eE  42deg  ,  vgpmbM;  =  1448
 1466   Gb  3 44.5   -71  41  s  Hyi    2.3   11.4   pF,  pS,  iR,  glbM,  *7  f
I 348   C+N 3 44.5   +32  17  s  Per   10.     7.3   pB,  vL,  vgbM
 1431   Gx  3 44.6   +02  51  r  Tau          15.  p  eF,  pL,  iR
I1985       3 44.6   +32  10  d  Per                  *8  in  F,  eL  neb
I 350   Gx  3 44.7   -11  49  m  Eri    0.8   14.  p  F,  S,  R,  v  dif
I1991       3 44.7   -51  33  d  Hor                  stell,  E  spnf
 1439   Gx  3 44.8   -21  55  s  Eri    2.3   12.  p  F,  pS,  gpmbM
 1445   Gx  3 44.9   -09  50  r  Eri                  vF,  S,  R,  *9  np  2'
I1997   Gx  3 44.9   -59  08  c  Ret    1.3           eF,  vS,  R,  cbM,  stell  N
 1440   Gx  3 45.0   -18  16  s  Eri    2.3   13.  p  pB,  pS,  R,  smbM  *13
 1442   Gx  3 45.0   -18  16  c  Eri                  pB,  vS,  bM;  =  1440
I1996       3 45.0   -57  20  d  Ret                  eeF,  eS,  eE  95deg
I1992       3 45.1   -51  01  d  Hor                  stell
I 334   Gx  3 45.2   +76  38  s  Cam    6.0   12.  p  pB,  S,  *13  inv  sf
 1438   Gx  3 45.4   -23  01  v  Eri    2.6           eF,  mE,  N,  *10  f  1'
 1452   Gx  3 45.4   -18  38  s  Eri    1.7   13.  p  F,  R,  lbM,  hazy  *
 1455   Gx  3 45.4   -18  38  c  Eri    2.6           vF,  S,  lE  30deg  ,  sbMN;  =  1452
 1450   Gx  3 45.6   -09  13  r  Eri                  eF,  pS,  R  (D,  dist  0'.4?)
 1441   Gx  3 45.7   -04  06  s  Eri    1.5   12.9   vF,  S,  iE,  *12  f
 1443    *  3 45.7   -04  01  F  Eri                  vF,  nf  1441
 1432   Nb  3 45.8   +24  22  s  Tau   30.           eF,  vL,  dif  (Maia,   in  Pleiades)
 1447   Gx  3 45.8   -08  59  r  Eri                  vF,  S,  R,  neb?  *7-  8  f  3'
I1994       3 45.8   -51  40  d  Hor                  E  ns
 1454    -  3 45.9   -20  41  r  Eri                  vF,  eS,  R,  (*?),  *9.5  sp  3'
 1446   Gx  3 46.0   -04  04  m  Eri    0.4   14.  p  eF,  f  1441
 1449   Gx  3 46.0   -04  08  s  Eri    1.1   13.5   vF,  vS,  vlE
 1435   Nb  3 46.1   +23  47  s  Tau   30.           vF,  vL,  dif  (Merope)
 1451   Gx  3 46.1   -04  04  s  Eri    0.7   13.3   vF,  vS,  lE
 1460   Gx  3 46.1   -36  41  r  Eri                  F,  S,  R,  *  att
 1463   Gx  3 46.2   -59  48  r  Ret                  cF,  S,  R,  glbM,  am  7  B  st
I 349   Nb  3 46.3   +23  56  s  Tau                  eF,  vS,  pos  165deg  ,  dist  36"  from  Merope
 1453   Gx  3 46.4   -03  58  s  Eri    2.1   11.6   pB,  S,  R,  *17  in  M
I 342   Gx  3 46.8   +68  06  s  Cam   17.8    9.  p  pB,  vS,  *12  close  n
 1458    -  3 47.0   -18  15  D  Eri                  nonexistent
 1459   Gx  3 47.0   -25  31  r  For          14.  p  eF,  pS,  gbM
I1993   Gx  3 47.1   -33  43  c  For    2.5           eF,  L,  cE,  *7.5  att,  v  diffic
 1473   Gx  3 47.4   -68  12  r  Hyi                  cF,  pL,  R,  gvlbM
I 351   Pl  3 47.5   +35  03  s  Per    0.1   12.  p  plan  =  *10,  *9  p  14s  ,  2'  s
I1990       3 47.5   +24  37  d  Tau                  vL,  mE  pf,  15'  l
I 352       3 47.6   -08  44  d  Eri                  F,  vS,  R,  bM
I1999       3 47.7   -56  57  d  Ret                  eeF,  vS,  cE  140deg
 1456    -  3 48.2   +22  34  r  Tau                  D*  10-12,  comp  nebulous  at  130deg  ,  9"
 1461   Gx  3 48.5   -16  24  s  Eri    3.3   11.7   pB,  S,  lE,  mbMN
I2000   Gx  3 49.1   -48  52  c  Hor    3.8           cB,  L,  eE  80deg  ,  vmbM
 1444   OC  3 49.4   +52  40  s  Per    4.     6.6   Cl  of  ab  30  st  12...14
 1462   Gx  3 50.3   +06  59  r  Tau          15.  p  vF,  S,  vlE
I1995       3 50.3   +25  35  d  Tau                  *6  in  eF,  eeL  neb
I2001       3 50.9   -48  38  d  Hor                  eF,  vS,  R,  3  st  nr
 1464   Gx  3 51.4   -15  25  r  Eri                  pF,  S,  R,  2  st  nr
I1998   Gx  3 51.5   +01  11  z  Tau          16.  p  F,  S,  R,  bMN
I2004       3 51.8   -49  25  d  Hor                  eF,  S
 1467   Gx  3 51.9   -08  51  r  Eri          15.  p  eF,  vS,  R,  *9  s  4'
I2010   Gx  3 52.0   -59  56  c  Ret    1.2           eF,  S,  E  70deg
I2051   Gx  3 52.0   -83  50  c  Men    2.6           !  vF,  vS,  stell  N  ellipt  ring
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 1476   Gx   3 52.1   -44  32 c   Hor    1.7          cF,  S,  E 90deg  , gbM
 1468   Gx   3 52.2   -06  21 r   Eri          15. p vF,  vS,  R,  bM
 1470   Gx   3 52.2   -09  01 r   Eri          15. p eF,  S,  E 0deg
I2011        3 52.5   -57  29 d   Ret                eeF,  vS,  R
 1483   Gx   3 52.7   -47  29 v   Hor                cF,  pL,  R,  vglbM
I2012        3 52.8   -58  38 d   Ret                eeF,  eS,  cE  ns
 1471    -   3 53.1   -15  24 r   Eri                vF,  vS,  E 45deg  ; = 1464?
I 354        3 53.3   +23  25 d   Tau                vF,  eeL,  v dif
 1490   Gx   3 53.5   -66  02 r   Ret                pB,  S,  vlE,  pmbM
 1465   Gx   3 53.6   +32  28 r   Per          15. p pF,  pS,  R,  pB*  nr  p
I2009   Gx   3 53.6   -48  59 c   Hor    1.9         eF,  S
 1472   Gx   3 53.7   -08  35 r   Eri                vF,  eS,  stell  N,  1st  of  3
I 355        3 53.8   +20  00 d   Tau                vF,  S,  R,  dif
 1477   Gx   3 54.0   -08  35 r   Eri                eF,  vS,  2nd  of  3
 1475    -   3 54.1   -08  07 r   Eri                eF,  eS,  R,  *14  np  4'
 1478   Gx   3 54.1   -08  34 r   Eri                eF,  vS,  3rd  of  3
I2006   Gx   3 54.1   -35  59 s   Eri    2.3   12. p pB,  S,  R,  * nr  nf,  D*  sp
 1474   Gx   3 54.2   -10  25 r   Eri          14. p vF,  S,  R
 1484   Gx   3 54.2   -37  00 r   Eri                vF,  L,  E,  vgvlbM
 1479    -   3 54.4   -10  12 r   Eri                eF,  S,  E,  p  of  2
 1481   Gx   3 54.4   -20  25 r   Eri          15. p eF,  S,  R,  2  B  st  f,  p  of  2
I2002   Gx   3 54.4   +10  43 u   Tau    1.4   15. p F,  E  ns,  dif,  *14  n
 1480         3 54.5   -10  16 d   Eri                eF,  S,  iR,  f  of  2,  *10  f  30s
 1482   Gx   3 54.7   -20  30 s   Eri    1.5   14. p F,  S,  vlE,  2  st  10  nr,  f  of  2
I 353   Nb   3 55.0   +25  29 s   Tau  180.          vF,  eeL,  v dif
I2007   Gx   3 55.4   -28  10 c   Eri    1.8         eF,  S,  R,  F*  att  nf
I2008        3 55.4   -28  10 c   Eri                eF,  vS,  eF*  v  close  nf;  =  IC  2007
I2014   Gx   3 55.4   -56  45 c   Ret    1.4         eeF,  vS,  R
 1487   Gx   3 55.8   -42  22 s   Eri    2.0   12. p pB,  pL,  R,  gbM,  2  st  triangle
 1486   Gx   3 56.3   -21  49 r   Eri          15. p eF,  vS,  R
I2003   Pl   3 56.4   +33  52 s   Per    0.1   13. p pB,  eS,  lE  ns,  *13  n  4",  *12  sp  18"
 1503   Gx   3 56.5   -66  02 r   Ret                eF,  pS,  R,  *10  np
I2013        3 56.7   -17  06 d   Eri                cB,  cL,  mE  170deg  ,  cbM,  susp
I2017   Gx   3 56.7   -59  24 c   Ret    1.3         eeF,  vS,  R
 1493   Gx   3 57.5   -46  12 s   Hor    2.6   12. p F,  cL,  R,  vglbM
 1520   OC   3 57.5   -76  50 A   Men                Cl,  pL,  lRi,  st  9-10
 1489   Gx   3 57.6   -19  14 r   Eri          14. p eF,  pS,  E 190deg
I2005   Gx   3 57.6   +36  48 z   Per          16. p F,  vS,  R,  stell
 1494   Gx   3 57.7   -48  54 s   Hor    2.6   12. p F,  L,  R,  vgvlbM,  3  st  n
I2018   Gx   3 57.9   -52  47 c   Dor    1.2         eF,  vS,  R
I2015        3 58.0   -40  27 d   Hor                eF,  S,  R,  bM,  susp
 1488   Gx   3 58.1   +18  34 r   Tau          15. p *12  inv  in  neb
 1492   Gx   3 58.1   -35  27 r   Eri                vF,  vS,  R
 1500   Gx   3 58.2   -52  19 r   Dor                F,  vS,  R,  pmbM,  *8  np
 1495   Gx   3 58.4   -44  28 c   Hor    2.9         eF,  S,  lE  90deg  ,  vgvlbM
I2022        3 58.7   -59  02 d   Ret                eeF,  eS,  mE  5deg  ,  cbM
I2020        3 59.0   -54  03 d   Ret                eF,  vS,  R
I2021        3 59.4   -52  40 d   Dor                eF,  vS,  R
 1511   Gx   3 59.5   -67  38 s   Hyi    3.3   12. p pB,  pS,  mE  121deg  .5,  gbM
I2023        3 59.7   -52  41 d   Dor                eF,  vS,  R
I2024   Gx   4 00.1   -53  22 c   Ret    1.1         eF,  vS,  cE  35deg
 1506   Gx   4 00.4   -52  34 r   Dor                eeeF,  S,  R,  bet  2  st  12  &  13
I2025   Gx   4 00.4   -53  04 c   Ret    1.1         eF,  vS,  cE  135deg
 1469   Gx   4 00.5   +68  35 s   Cam    2.3   15. p vF,  vS,  R,  B*  nr
 1498    -   4 00.5   -12  01 r   Eri                Cl,  S,  C
 1499   Nb   4 00.7   +36  37 s   Per  145.          vF,  vL,  E  ns,  dif
I2028   Gx   4 01.3   -52  42 c   Dor    1.1         cF,  vS,  R
I2029   Gx   4 01.3   -52  48 c   Dor    1.3         eF,  vS,  R
I2016   Gx   4 01.9   +20  13 z   Tau          16. p eF,  vS,  *15  s  30"
I2019   Gx   4 02.0   +05  38 u   Tau    1.1   15. p F,  S,  R,  stell,  r
 1497   Gx   4 02.1   +23  08 r   Tau          14. p eF,  vS,  iR,  mbM
 1504   Gx   4 02.5   -09  19 r   Eri          15. p eF,  S,  R,  gbM
 1505   Gx   4 02.7   -09  18 r   Eri          15. p eF,  S,  R,  gbM
 1491   Nb   4 03.4   +51  19 s   Per    3.          vB,  S,  iF,  bM,  r,  *  inv
 1510   Gx   4 03.5   -43  25 s   Hor    1.0   13.0  F,  pL,  R,  vgmbM
I 358   Gx   4 03.7   +19  53 u   Tau    1.4   15. p vS,  dif,  lbM
I 357   Gx   4 03.8   +22  09 u   Tau    1.3   14. p F,  S,  R,  N  =  13.5
 1512   Gx   4 03.9   -43  21 s   Hor    4.0   10.6  eF  ring  ,  B,  cL,  R,  bM
I2026        4 03.9   -11  11 d   Eri                vF,  vS,  stell
 1509   Gx   4 04.0   -11  12 r   Eri          15. p vF,  vS,  lE,  F*  nr  p
 1515   Gx   4 04.1   -54  06 s   Dor    5.4   11.0  B,  L,  vmE  10deg  ,  bM
 1496   OC   4 04.4   +52  37 s   Per    6.    10. p Cl,  segment  of  a  ring
 1507   Gx   4 04.5   -02  11 s   Eri    3.4   12.2  vF,  pL,  mE,  vlbM,  er
I2030        4 04.9   -19  14 d   Eri                cF,  vS,  eE  135deg  ,  susp
 1485   Gx   4 05.1   +71  00 s   Cam    2.4   14. p eF,  pS,  R
 1526   Gx   4 05.2   -65  50 r   Ret                eF,  vS,  R,  glbM
 1508   Gx   4 05.8   +25  24 r   Tau          15. p vF,  vS,  R,  bM,  r
I2031        4 05.9   -05  37 d   Eri                eF,  vS,  dif,  lbM,  *11  nf  3'
 1522   Gx   4 06.1   -52  40 r   Dor                eF,  vS,  R,  vlbM
 1523  Ast   4 06.2   -54  06 D   Dor                only  3  vF  st  (not  a  neb)
I2034   Gx   4 06.6   -57  58 c   Ret    1.2         eeF,  vS,  cE  115deg
I2027   Gx   4 06.7   +37  07 u   Per    1.2   16. p F,  vS,  R,  vlbM
 1518   Gx   4 06.8   -21  11 s   Eri    3.0   11.8  B,  L,  pmE,  gbM,  *8  sp
 1501   Pl   4 07.0   +60  55 s   Cam    0.9   13. p PN  ,  pB,  pS,  vlE,  1'  diam
I2032   Gx   4 07.1   -55  20 c   Dor    1.5         eF,  vS,  R
 1529   Gx   4 07.2   -62  54 r   Ret                vF,  S,  R,  gbM
I2033   Gx   4 07.2   -53  41 c   Dor    1.3         eF,  vS,  cE  130deg
I2054        4 07.2   -78  15 d   Men                eeF,  eS,  vF*  1'  nf,  susp
 1502   OC   4 07.7   +62  20 s   Cam    8.     5.7  Cl,  pRi,  cC,  iF
I 356   Gx   4 07.8   +69  49 s   Cam    5.2   11. p pF,  pL,  bM,  *8.5  4'  n
 1516   Gx   4 08.1   -08  53 r   Eri          15. p eeF,  S,  E,  psmbM,  er
 1519   Gx   4 08.1   -17  12 s   Eri    2.0   13. p vF,  S,  lE,  vS*  inv
 1521   Gx   4 08.3   -21  03 s   Eri    2.9   11.4  pB,  R,  bM
I2037   Gx   4 08.3   -58  45 c   Ret    1.5         eF,  vS,  eE  90deg  ,  cbM
 1527   Gx   4 08.4   -47  53 s   Hor    3.4   12. p pB,  pS,  E 77deg  ,  vsmbMRN
 1534   Gx   4 08.8   -62  47 r   Ret                F,  S,  R,  vS*  3/4deg  sf
I2038   Gx   4 08.9   -56  00 c   Dor    1.7         eF,  vS,  eE  145deg
I2035   Gx   4 09.0   -45  31 s   Hor          12. p F,  vS,  R
I2039   Gx   4 09.0   -56  01 c   Dor    1.3         eF,  vS,  R
 1514   Pl   4 09.2   +30  47 s   Tau    1.9   10. p *9  in  neb  3'  diam
 1517   Gx   4 09.3   +08  39 r   Tau          14. p vF,  vS,  R,  r,  *9-  10  sf
 1533   Gx   4 09.9   -56  07 s   Dor    2.9   10.9  vB,  vL,  R,  smbM,  2  st  10  nf
 1513   OC   4 10.0   +49  31 s   Per    9.     8.4  Cl,  L,  vRi,  pC,  st  vL
I2036        4 10.0   -39  42 d   Hor                eeF,  pS,  R,  v  diffic,  *9  f
 1524    -   4 10.3   -08  48 r   Eri                eF,  pS,  R,  gbM,  Dneb  with  1525
 1525    -   4 10.3   -08  48 r   Eri                eF,  pS,  R,  gbM,  at  340deg  ,  0'.5  from  1524
 1536   Gx   4 11.0   -56  29 s   Ret    2.0   13. p vF,  R,  pL,  vlbM
I2043   Gx   4 11.2   -53  41 c   Dor    1.3         eF,  vS,  eE  5deg  ,  vmbM
I2044        4 11.2   -54  31 d   Dor                eF,  vS,  R
I2046        4 11.4   -54  40 d   Dor                vF,  vS,  R
I2042        4 11.7   -47  16 d   Hor                *9  in  neb  1'  diam
 1531   Gx   4 12.0   -32  51 s   Eri    1.3   12.1  pB,  pL,  R,  bM,  np  of  2
 1532   Gx   4 12.1   -32  52 s   Eri    5.6   11. p B,  vL,  vmE  32deg  ,  psmbM
I2049   Gx   4 12.1   -58  33 c   Ret    1.1         eF,  vS,  R
I2041   Gx   4 12.6   -32  49 c   Eri    1.5         eF,  vS,  R,  *10  close  s
 1543   Gx   4 12.8   -57  44 s   Ret    3.9   10.6  B,  pL,  E,  smbMN  =  *11
I 360   Nb   4 13.0   +25  38 s   Tau  180.          vF,  eeL,  v dif
I2040   Gx   4 13.0   -32  33 c   Eri    1.6         vF,  vS,  R,  rr?,  1531-  32  s
 1557    -   4 13.3   -70  25 r   Hyi                Cl,  vlC,  ab  20  sc  st
 1537   Gx   4 13.7   -31  39 s   Eri          12. p vB,  pS,  lE,  psvmbM
I2050   Gx   4 13.9   -53  29 c   Dor    1.4         F,  vS,  cE  60deg
 1535   Pl   4 14.2   -12  44 s   Eri    0.7   10. p PN  ,  vB,  S,  R,  pS,  vsbM,  r
I2048    ?   4 14.3   -33  07 x   Eri                eeF,  eS,  B*  f,  v  diffic
 1546   Gx   4 14.6   -56  04 s   Dor    3.2   11.6  pB,  lE,  gbMEN,  **   p
I2045        4 14.6   -13  10 d   Eri                eF,  eS,  alm  stell,  nr  1538
 1538   Gx   4 14.7   -13  12 r   Eri          15. p eF,  vS,  R,  gbM
I2047        4 14.9   -13  11 d   Eri                eF,  eS,  diffic,  nr  1538
I2052        4 15.0   -54  20 d   Dor                vF,  vS,  mE
 1540   Gx   4 15.2   -28  29 c   Eri    1.2         vF,  vS,  E,  gvlbM,  r
 1528   OC   4 15.4   +51  14 s   Per   24.     6.4  Cl,  B,  vRi,  cC
 1549   Gx   4 15.7   -55  36 s   Dor    3.7    9.9  B,  pS,  R
I2053        4 15.8   -49  22 d   Dor                eF,  S,  cE  140deg  ,  susp
 1553   Gx   4 16.2   -55  47 s   Dor    4.1    9.5  vB,  pS,  R,  gmbM,  am  3  st;  a  Dneb
I2056   Gx   4 16.5   -60  13 s   Ret    1.9   12. p F,  pL,  R,  bM
I 362   Gx   4 16.7   -12  13 m   Eri    0.3   14. p pB,  vS,  bM
 1541   Gx   4 17.0   +00  50 r   Tau          15. p vF,  S
 1542   Gx   4 17.2   +04  48 r   Tau          15. p vF,  S,  E
 1547        4 17.2   -17  53 D   Eri                pF,  pS,  iR,  Cl
 1559   Gx   4 17.6   -62  47 s   Ret    3.3   10.5  vB,  vL,  mE,  vgpmbM,  *14  att  n
 1556   Gx   4 17.7   -50  10 D   Dor                cF,  S,  E 165deg  ,  vglbM
I2055        4 17.8   -48  55 d   Dor                F,  S,  cE  ns,  susp
I2058   Gx   4 17.9   -55  56 c   Dor    2.7         cB,  cL,  eE  10deg
I2060   Gx   4 17.9   -56  37 c   Ret    1.3         F,  S,  bM
I 363        4 18.9   +03  03 d   Tau                eF,  *9  nf  3'
 1539   Gx   4 19.0   +26  51 r   Tau          15. p vF,  vS,  gbM
I 359   Nb   4 19.0   +28  12 s   Tau  15.          eeF,  pL,  R
I 361   OC   4 19.0   +58  18 s   Cam    6.    11.7  F,  L  (neb  Cl?)
I 364   Gx   4 19.1   +03  10 z   Tau          15. p vF,  vS,  R,  sbM
I 365   Gx   4 19.2   +03  20 m   Tau    0.6   14. p pB,  S,  iF,  sbM
 1558   Gx   4 19.3   -45  02 v   Hor                pF,  S,  E,  gbM
 1550   Gx   4 19.6   +02  26 r   Tau          14. p vF,  S,  R,  *13  nr
 1551    -   4 19.6   +01  25 r   Tau                F,  vS,  R,  probably  =  1550
I 366        4 19.6   +02  21 d   Tau                eF,  3'  sf  of  1550
 1566   Gx   4 20.0   -54  56 s   Dor    7.6    9.4  B,  vL,  VG,  svmbM,  15s  d  in  RA
 1552   Gx   4 20.3   -00  40 r   Eri          14. p cF,  pS,  lE,  vgbM,  *11  sp
I2059   Gx   4 20.4   -31  44 c   Eri    1.4         eeF,  pL,  R
I 367   Gx   4 20.6   -14  47 m   Eri    0.3   15. p pB,  pL,  dif
 1545   OC   4 20.9   +50  15 s   Per   18.     6.2  Cl,  pRi,  lC,  st  L
 1548   OC   4 21.0   +36  56 r   Per                Cl,  vL,  lRi,  lC,  st  10...12
 1567   Gx   4 21.1   -48  15 c   Cae    1.2         F,  S,  R,  bM
I2065   Gx   4 21.5   -55  56 c   Dor    1.2         vF,  vS,  vmE  45deg  ,  pmbM
 1562   Gx   4 21.7   -15  45 r   Eri                vF,  eS,  R,  glbM
 1554   Nb   4 21.8   +19  32 s   Tau                !!!  var,  S,  R,  Nn  =  *13
I2057   Gx   4 21.9   +04  03 z   Tau          15. p pB,  pS,  R,  gbM,  r
 1574   Gx   4 22.0   -56  58 s   Ret    2.0   10.5  pB,  S,  R,  pgbM,  2  S  st  sf
 1570   Gx   4 22.1   -43  38 c   Cae                F,  S,  R,  gbM;  =  1571
 1571   Gx   4 22.2   -43  38 r   Cae                vF,  S,  R,  gbM,  **   nf
 1572   Gx   4 22.6   -40  36 r   Cae                pF,  S,  R,  *13  nf  1'
I 368   Gx   4 22.7   -12  37 m   Eri    0.8   14. p eS,  R,  bM
 1555   Nb   4 22.9   +19  32 r   Tau                !!!  vF,  S,  variable
 1563        4 22.9   -15  44 D   Eri                eF,  vS,  R,  lbM,  D  with  1564
 1564   Gx   4 22.9   -15  44 r   Eri                eF,  vS,  R,  lbM,  D  with  1563
I2063        4 22.9   -15  44 F   Eri                eF,  vS,  nr  1561-  65
 1561   Gx   4 23.0   -15  51 r   Eri          15. p vF,  vS,  lE  170deg  ,  glbM,  *8  p  6s
 1530   Gx   4 23.4   +75  18 s   Cam    4.9   12. p pB,  L
 1565   Gx   4 23.4   -15  45 r   Eri          15. p eF,  pS,  lE
I 369   Gx   4 23.5   -11  47 m   Eri    0.5   15. p F,  S,  R,  stellar
I2064        4 23.5   -15  41 d   Eri                susp,  nf  1565
I2066        4 23.5   -54  45 d   Dor                eeF,  vS,  R
 1578   Gx   4 23.8   -51  35 r   Dor                pF,  S,  R,  bM
I2061        4 24.0   +21  05 d   Tau                F,  cS,  R,  susp
I 370   Gx   4 24.1   -09  23 m   Eri    1.2   14. p eF,  S,  dif
 1568   Gx   4 24.4   -00  45 r   Eri          15. p eF,  vS,  R,  nearly  bet  2  st
I2070   Gx   4 24.6   -57  59 c   Dor    1.7         vF,  vS,  cbM
 1581   Gx   4 24.7   -54  56 r   Dor                F,  S,  E,  glbM
I2069        4 25.9   -48  12 d   Cae                eeF,  S,  R,  susp
 1576   Gx   4 26.2   -03  37 r   Eri          15. p eF,  bM,  bet  2  st
I2071        4 26.2   -53  08 d   Dor                eeF,  vS,  cE  80deg
 1575   Gx   4 26.3   -10  07 D   Eri          13. p vF,  pS,  R,  *9.5  s  2';  =  1577
 1577   Gx   4 26.3   -10  07 D   Eri          13. p vF,  pL,  R,  lbM,  *  nr  s
I2068   Gx   4 26.6   -42  06 c   Cae    1.3         eF,  pL,  R,  1585  f
I2073   Gx   4 26.6   -53  11 c   Dor    1.4         vF,  vS,  eE  60deg  ,  stell  N
I2072        4 26.9   -48  22 d   Cae                cF,  S,  R,  susp
 1585   Gx   4 27.5   -42  09 r   Cae                pF,  S,  R,  gbM,  *12  288deg
 1596   Gx   4 27.6   -55  02 s   Dor    3.9   11.0  B,  pL,  mE  15deg  ,  smbM,  p  of  2
 1602   Gx   4 27.9   -55  03 v   Dor                eF,  pL,  lE,  f  of  2
 1584   Gx   4 28.1   -17  32 r   Eri                F,  eS,  R,  sbMN
I2076        4 28.1   -48  13 d   Cae                vF,  vS,  cE  130deg  ,  susp
 1580   Gx   4 28.2   -05  11 r   Eri          14. p vF,  vS,  R,  r
 1583   Gx   4 28.3   -17  37 r   Eri          15. p F,  vS,  R,  sbMN
 1595   Gx   4 28.4   -47  49 c   Cae    1.5         vF,  S,  R,  bM
I2079   Gx   4 28.5   -53  44 c   Dor    1.3         eF,  vS,  E  130deg
 1598   Gx   4 28.6   -47  47 c   Cae    1.6         F,  S,  R,  bM
I2081   Gx   4 29.0   -53  37 c   Dor    1.5         eF,  vS,  R,  bet  2  F  st
I2082   Gx   4 29.1   -53  50 s   Dor          12.8  cF,  S,  R
 1629   OC   4 29.3   -71  50 r   Hyi                vF,  pL,  R,  glbM
 1591   Gx   4 29.4   -26  44 r   Eri          13. p pF,  pS,  R,  gbM
 1592        4 29.6   -26  58 D   Eri                only  F  st
I 372    ?   4 30.1   -05  01 n   Eri                F,  vS,  R,  lbM
 1579   Nb   4 30.2   +35  16 s   Per   12.          pB,  vL,  iR,  mbM,  *8  350deg  ,  2'
I 371        4 30.2   -00  33 d   Eri                stellar,  eS  (neb?)
 1586   Gx   4 30.7   -00  19 r   Eri          14. p vF,  iF,  vlbM,  bet  **   &  *14
 1587   Gx   4 30.7   +00  40 s   Tau    2.0   13. p F,  pS,  R,  r,  p  of  Dneb
I 373   Gx   4 30.7   -04  52 m   Eri    1.0   15. p F,  vS,  R,  mbM
I2083   Gx   4 30.7   -53  59 c   Dor    1.1         eF,  vS,  R
 1569   Gx   4 30.8   +64  51 s   Cam    2.9   11.2  pB,  S,  lE,  BNM,  *9.5  n  1'
 1588   Gx   4 30.8   +00  39 s   Tau    1.8   14. p F,  vS,  R,  r,  f  of  Dneb
 1589   Gx   4 30.8   +00  51 s   Tau    3.1   14. p F,  pL,  lE  132deg  ,  *  42deg  ,  80"
 1594   Gx   4 30.8   -05  48 r   Eri          14. p vF,  pS
I2067        4 30.8   +35  27 d   Per                vF,  R,  *15  inv  n,  *17  close  np
I2075   Gx   4 31.0   -05  48 v   Eri    2.0         eF,  pL,  vlbM
I 375        4 31.1   -12  58 d   Eri                vF,  dif,  lbM
I 376   Gx   4 31.1   -12  27 m   Eri    0.8   14. p F,  iF
 1590   Gx   4 31.2   +07  37 s   Tau    1.3   15. p F,  S,  *12  nf
 1597   Gx   4 31.2   -11  17 r   Eri          15. p eF,  vS,  R,  gbM
I 377        4 31.3   -12  27 d   Eri                F,  iF
I2074   OC   4 31.3   +07  42 x   Tau                vF,  S,  st  inv;  S  Cl?
I2085   Gx   4 31.4   -54  25 c   Dor    2.4         eF,  vS,  eE  110deg
I 378        4 31.5   -12  18 d   Eri                *  strongly  nebs
 1599   Gx   4 31.6   -04  35 s   Eri    1.1   15. p vF,  vS,  R,  vlbM
I2086        4 31.6   -53  38 d   Dor                eeF,  vS,  R
 1600   Gx   4 31.7   -05  05 s   Eri    2.5   11.1  pB,  pL,  R,  gmbM
 1603   Gx   4 31.7   -05  06 r   Eri          15. p vF,  vS
 1617   Gx   4 31.7   -54  36 s   Dor    4.7   10.4  B,  L,  mE  106deg  ,  vg,  vsmbMN  5"
I 380   Gx   4 31.7   -12  56 m   Eri    0.6   15. p vF,  bM
 1601   Gx   4 31.8   -05  06 s   Eri    1.0   13.8  vF,  vS
 1593   Gx   4 31.9   +00  34 A   Tau                vF;  =  1608
 1604   Gx   4 31.9   -05  22 r   Eri          14. p eF,  S,  R,  bet  *  &  D*
 1608   Gx   4 31.9   +00  35 r   Tau          15. p pF,  cS,  *12  2'  n;  =  IC  2077
I 379   Gx   4 31.9   -07  15 m   Eri    0.9   15. p vF,  S,  R,  dif
I2078        4 31.9   -04  41 d   Eri                eF,  pS
 1582   OC   4 32.0   +43  51 s   Per   37.     7. p Cl,  vL,  pRi,  lC,  st  L
 1607   Gx   4 32.0   -04  27 r   Eri          15. p F,  S,  R,  lbM
 1606   Gx   4 32.1   -05  02 v   Eri                eF
I2077        4 32.1   +00  34 x   Tau                F,  vS,  gbMN;  =  1608
I2084        4 32.1   -48  17 d   Cae                F,  S,  R,  susp
I2080        4 32.3   -05  45 d   Eri                eF,  vS,  1594  p  about  90s  ,  3'  s
I 374   Gx   4 32.5   +16  38 z   Tau          16. p F,  S,  R,  mbM
 1609   Gx   4 32.6   -04  22 r   Eri          15. p vF,  eS,  *17  45"  n
I2089        4 32.6   -75  33 d   Men                eeF,  vS,  R,  F*  1'  f,  susp
 1616   Gx   4 32.7   -43  43 r   Cae                F,  S,  E,  vglbM
 1560   Gx   4 32.8   +71  53 s   Cam    9.8   11.5  vF,  L,  E,  *9.3  sp
I2062   Gx   4 32.8   +71  54 t   Cam    8.8   12. p eF;  =  1560
 1611   Gx   4 33.0   -04  17 r   Eri          15. p eF,  S,  E 90deg  +/-
 1612   Gx   4 33.1   -04  10 r   Eri          15. p vF,  vS,  R,  gmbM
 1613   Gx   4 33.3   -04  15 r   Eri          15. p F,  vS,  R,  mbM
 1614   Gx   4 34.0   -08  35 s   Eri    1.3   12.9  pF,  S,  R,  lbM
 1610   Gx   4 34.1   -04  42 r   Eri                eF,  vS,  R,  bMN
 1623   Gx   4 34.9   -13  31 r   Eri                eF,  vS,  R,  gbMN
 1573   Gx   4 35.0   +73  15 s   Cam    2.2   14. p vF,  S,  *9.5  f
 1605   OC   4 35.0   +45  15 s   Per    5.    10.7  Cl,  vF,  pS,  C,  st  eS
 1615   Gx   4 36.0   +19  57 s   Tau    1.6   15. p vF,  vS,  R,  lbM,  vS*  inv
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 1618   Gx   4 36.1   -03  09  s   Eri    2.8   12.6   F, S, iF, lbM,  2 st sf
 1641   OC   4 36.1   -65  46  r   Dor                  Cl,  pL,  pRi,  pmC,  st 11...16
 1619    -   4 36.2   -04  50  r   Eri                  eeF,  S,  R;  nonexistent?
 1621   Gx   4 36.3   -04  58  r   Eri          14.  p  eF,  S,  R,  lbM
 1620   Gx   4 36.6   -00  09  s   Eri    3.0   14.  p  vF,  pL,  mE  140deg  ,  B**   nf
 1622   Gx   4 36.6   -03  11  s   Eri    3.9   12.3   vF,  S,  *20  p 5s  ,  1618  p
 1625   Gx   4 37.1   -03  18  s   Eri    2.7   12.4   vF,  E  141deg  ,  sbM,  F*  att  np,  *6  p  48s
 1626    -   4 37.2   -05  00  r   Eri                  eF,  vS,  R,  *8  np
 1630   Gx   4 37.3   -18  54  r   Eri                  eF,  eS,  R
 1627   Gx   4 37.5   -04  51  r   Eri          13.  p  eF,  pL,  R,  2  st  sf,  s  of  2
 1628   Gx   4 37.5   -04  42  r   Eri          14.  p  vF,  pS,  mE  ns,  n  of  2
 1651   Gb   4 37.5   -70  35  r   Men                  pF,  L,  vlE,  vglbM
 1632   Gx   4 37.9   -09  31  r   Eri          13.  p  eF,  vS,  R
I 382   Gx   4 37.9   -09  31  m   Eri    2.0   13.  p  pB,  pL,  R,  SN
 1644   Gb   4 38.0   -66  12  r   Dor          13.  p  F,  S,  R,  gbM
 1649    -   4 38.1   -68  49  r   Dor                  F,  pS,  R,  gbM;  = 1652?
 1652   Gb   4 38.1   -68  40  r   Dor                  vF,  S,  R,  glbM
 1831   Gx   4 38.4   -20  40  r   Eri          14.  p  vF,  S
I 383        4 39.0   +09  54  d   Tau                  vF,  S,  dif,  *11.5  f
I 384        4 39.3   -07  50  d   Eri                  F,  eS,  R,  *11  n
I 385        4 39.5   -07  06  d   Eri                  vF,  vS,  R,  dif
I2103   Gx   4 39.8   -76  50  c   Men    1.7           cF,  vS,  eE  80deg  ,  stell  N
 1633   Gx   4 40.0   +07  21  r   Tau          14.  p  eF,  S,  R,  *8  sp,  p  of  Dneb
 1634   Gx   4 40.0   +07  20  r   Tau          15.  p  eF,  vS,  f  of  Dneb
I 386        4 40.0   -09  27  d   Eri                  vF,  vS,  vlbM
I2087   Nb   4 40.0   +25  44  s   Tau    4.            eeF,  in  hole  of  eL  neby
 1635   Gx   4 40.1   -00  33  s   Eri    1.7   14.  p  F,  S,  R,  bM,  *11  nf  12s
 1624   C+N  4 40.4   +50  27  s   Per    5.    10.4   F,  cL,  iF,  6  or  7  st  +  neb
 1636   Gx   4 40.7   -08  36  r   Eri          14.  p  vF,  pS,  R,  vgbM,  r,  *  nf  1'
 1639   ***  4 40.9   -17  00  D   Eri                  only  3  st  12.5  forming  equilateral  triangle
 1637   Gx   4 41.5   -02  51  s   Eri    3.3   10.9   cB,  L,  R,  vgbM
 1638   Gx   4 41.6   -01  49  s   Eri    2.5   12.1   F,  pL,  lE
I 387   Gx   4 41.7   -07  05  v   Eri    1.5           eF,  pL,  v  dif,  diffic
I 388   Gx   4 42.0   -07  18  m   Eri    0.4   15.  p  vF,  v  dif,  S*  inv
I 389   Gx   4 42.0   -07  18  m   Eri    0.4   15.  p  F,  S,  R,  stellar
I 390   Gx   4 42.1   -07  13  m   Eri    0.7   15.  p  vF,  vS,  R
 1640   Gx   4 42.2   -20  26  s   Eri    2.8   11.7   vF,  pS,  E  40deg  ,  gbM
 1673   OC   4 42.4   -69  51  r   Men                  at  7  to  *10
 1642   Gx   4 42.9   +00  37  s   Tau    2.0   14.  p  F,  R,  cometary,  triangle  with  2  st  18  f
 1669   Gx   4 43.0   -65  48  r   Dor                  eF,  S,  R
 1643   Gx   4 43.6   -05  17  r   Eri          14.  p  F,  vS,  iR,  bM
 1676   OC   4 43.7   -68  50  r   Dor                  vF,  pL,  iR,  r
I2088        4 43.7   +27  16  d   Tau                  eeL,  3deg   long
 1645   Gx   4 44.0   -05  26  r   Eri          14.  p  vF,  pS,  R  (1643  np)
 1658   Gx   4 44.0   -41  27  r   Cae                  F,  pS,  pmE,  glbM
 1660   Gx   4 44.2   -41  29  r   Cae                  vF,  S,  lE,  glbM
 1646   Gx   4 44.3   -08  33  r   Eri          14.  p  F,  vS,  iR,  bM,  *7  np
I 381   Gx   4 44.4   +75  39  s   Cam    3.4   14.  p  F,  S,  bM,  *12  np
 1648   Gx   4 44.5   -08  29  r   Eri          16.  p  eeF,  pS,  v  diffic,  1646  sp
I2090        4 44.7   -34  00  d   Cae                  vF,  pS,  R,  3  st  sp
 1841   Gb   4 45.    -84  00  r   Men          12.  p  pF,  L,  iR,  vsbM,  r
 1650   Gx   4 45.1   -15  51  r   Eri          14.  p  vF,  pS,  E  0deg  ,  bMN
 1672   Gx   4 45.7   -59  15  s   Dor    4.8   11.  p  B,  L,  smbMN
 1653   Gx   4 45.8   -02  25  s   Eri    2.0   13.  p  F,  cS,  R,  lbM
 1654   Gx   4 45.8   -02  06  s   Eri    1.0   14.  p  F,  S,  R,  lbM,  r?  p  of  2
 1656   Gx   4 45.8   -05  08  r   Eri          14.  p  L,  stell  N  in  F  neb  E  npsf
 1647   OC   4 46.0   +19  04  s   Tau   45.     6.4   Cl,  vL,  st  L,  sc
 1668   Gx   4 46.1   -44  43  r   Cae                  eF,  R,  att  to  *14
 1655        4 46.2   +20  56  D   Tau                  hazy  *
 1657   Gx   4 46.2   -02  04  r   Eri          15.  p  fainter  but  larger  than  1654
I 392   Gx   4 46.4   +03  30  u   Ori    1.5   15.  p  pB,  S,  R,  N  =  12.5
 1659   Gx   4 46.5   -04  47  s   Eri    1.7   12.5   pF,  pS,  iE  90deg  +/-  ,  bM
I2091   Ast  4 46.6   -04  41  x   Eri                  F,  stell  N
I2092   D*   4 46.8   -04  57  x   Eri                  S,  spiral,  stell  N
 1661   Gx   4 47.2   -02  03  r   Ori          14.  p  vF,  vS,  bM
 1693   OC   4 47.5   -69  21  r   Dor                  F,  S,  R
 1695   OC   4 47.6   -69  24  r   Dor                  F,  S,  R
I2093   D*   4 47.6   -02  43  F   Ori                  vF,  stell
I 393   Gx   4 47.9   -15  32  m   Eri    0.3   15.  p  F,  vS,  iF,  lbM
 1696   OC   4 48.0   -68  16  r   Dor                  vF,  E,  vlbM
 1665   Gx   4 48.2   -05  25  r   Eri          14.  p  eF,  pL,  R,  lbM
 1688   Gx   4 48.4   -59  48  s   Dor    2.4   12.  p  pB,  pL,  iR,  pgmbM
I2094        4 48.4   -05  22  d   Eri                  spiral,  F  stell  N
 1662   OC   4 48.5   +10  56  s   Ori   20.     6.4   Cl  of  L  &  S  sc  st
 1666   Gx   4 48.5   -06  34  s   Eri    1.3   14.  p  vF,  pS,  R
 1663   OC   4 48.6   +13  10  r   Ori                  Cl,  lRi,  st  L  &  S
 1667   Gx   4 48.6   -06  19  s   Eri    1.5   12.1   pF,  pS,  R,  r?
 1680   Gx   4 48.6   -47  49  c   Pic    1.3           vF,  S,  R,  r  or  st  inv
 1697   OC   4 48.6   -68  32  r   Dor                  glob.  cl.  ,  pB,  L,  R,  rr
I2095   Gx   4 48.7   -05  08  m   Eri    1.3   15.  p  F,  S,  E  spnf,  spiral?
I 394    ?   4 48.9   -06  17  x   Eri                  vF,  dif  (vS  Cl?)
 1702   OC   4 49.3   -69  51  r   Men                  Cl,  vF,  S
 1698   Nb   4 49.4   -69  10  r   Dor                  pB,  pS,  R,  glbM
I2105   Nb   4 49.4   -69  12  x   Dor                  PN  ,  stellar
I 395        4 49.6   +00  15  D   Ori                  eF,  vS,  R,  F*  close  f
I2096   ***  4 49.6   -04  59  F   Eri                  S,  E,  spiral,  stell  N
 1704   OC   4 49.7   -69  45  r   Dor                  F,  pS,  lE,  r
 1670   Gx   4 49.9   -02  44  r   Ori          14.  p  vF,  vS
 1679   Gx   4 50.0   -31  59  t   Cae    3.2           vB,  L,  iR,  4  st  inv
 1671    -   4 50.3   -00  46  r   Ori                  pF,  pS,  R
I2097        4 50.3   -05  05  d   Eri                  F,  E  npsf,  spiral,  lbM
 1711   OC   4 50.5   -70  00  r   Men          10.  p  glob.  cl.  ,  B,  S,  iR,  rrr,  st  14
I2098   Gx   4 50.7   -05  26  m   Eri    2.0   14.  p  F,  spiral,  lbM
 1677   Gx   4 50.8   -04  52  r   Eri          15.  p  pF,  pL,  lE
I2099   Gx   4 50.8   -04  54  m   Eri    0.6   15.  p  S,  mbMN
 1664   OC   4 51.1   +43  42  s   Aur   18.     7.6   Cl,  lRi,  lC,  pL
I2100   D*   4 51.2   -04  50  F   Eri                  vF,  S,  lE  stell
 1687   Gx   4 51.3   -33  56  r   Cae                  vF,  S,  R,  vglbM
 1712   C+N  4 51.3   -69  28  r   Dor                  Cl,  pB,  S
I2101   Gx   4 51.6   -06  15  m   Eri    1.5   14.  p  F,  E  npsf,  bM,  prob  spir
 1678   Gx   4 51.7   -02  38  r   Ori          14.  p  vF,  S
 1681   Gx   4 51.7   -05  49  r   Eri          13.  p  vF,  S,  R,  vlbM
I2102   Gx   4 51.9   -04  58  m   Eri    1.1   15.  p  vF,  lbM,  prob  spir
I2111   Nb   4 51.9   -69  24  x   Dor                  PN  ,  stellar
 1714   Nb   4 52.1   -66  56  r   Dor                  vB,  S,  E  or  biN,  bM,  sp  of  2
 1715   Nb   4 52.1   -66  55  r   Dor                  vF,  S,  R,  sbM,  2  st  nr,  nf  of  2
 1718   OC   4 52.2   -67  04  r   Dor                  F,  pS,  R,  vglbM
 1722   C+N  4 52.2   -69  24  r   Dor                  Cl,  pF,  S,  R,  2nd  of  3
 1727   C+N  4 52.2   -69  21  r   Dor                  Cl,  pB,  pS,  pmE,  st  12
 1682   Gx   4 52.3   -03  06  r   Ori          14.  p  vF,  vS,  1684  f  12s  +/-  ,  *9  s  4'.5
 1683   Gx   4 52.3   -03  01  r   Ori                  vF,  R
 1674    -   4 52.4   +23  54  r   Tau                  1st  of  2  F  neb  in  same  field
 1675    -   4 52.4   +23  54  r   Tau                  2nd  of  2  F  neb  in  same  field
 1684   Gx   4 52.5   -03  06  r   Ori          13.  p  pF,  pS,  R,  bM,  *9,   225deg  +/-
 1706   Gx   4 52.5   -62  59  c   Dor    1.4           F,  pS,  R,  vglbM
 1685   Gx   4 52.6   -02  57  r   Ori          14.  p  F
 1686   Gx   4 52.8   -15  22  r   Eri          14.  p  eF,  vS,  mE  30deg
 1703   Gx   4 52.8   -59  45  v   Dor    3.2           F,  L,  R,  vglbM,  **   att
 1732   OC   4 52.9   -68  40  r   Dor                  S,  R,  close  **   in  M
 1736   Nb   4 53.1   -68  04  r   Dor                  B,  R,  r
 1734   OC   4 53.3   -68  47  r   Dor                  pB,  L,  R,  gmbM
 1731   C+N  4 53.4   -66  56  r   Dor                  Cl,  pL,  lRi,  lC,  st  10...15
 1689    -   4 53.6   -06  20  r   Eri                  pB,  pS,  lE;  =  1667?
 1733   OC   4 53.9   -66  41  r   Dor                  eF,  pS,  R,  gbM
 1735   C+N  4 53.9   -67  07  r   Dor                  pF,  pS,  R,  2  st  att
 1743   C+N  4 54.0   -69  12  r   Dor                  B,  pL,  R,  gbM,  r,  2nd  of  4
 1705   Gx   4 54.2   -53  22  s   Pic    1.8   12.3   pF,  S,  R,  pmbM
 1751   Gb   4 54.2   -69  49  r   Men                  eF,  pL,  iR
 1690   Gx   4 54.3   +01  38  s   Ori    1.3   14.  p  vF,  vS,  am  vS  st,  L*  sp
 1737   C+N  4 54.3   -69  12  r   Dor                  vF,  S,  1st  of  4
 1745   C+N  4 54.3   -69  12  r   Dor                  F,  S,  3rd  of  4
 1748   C+N  4 54.4   -69  12  r   Dor                  pB,  vS,  R,  4th  of  4
 1754   Gb   4 54.4   -70  27  r   Men                  F,  S,  R,  *13  att,  135deg
 1691   Gx   4 54.6   +03  15  r   Ori          13.  p  F,  S,  *11  inv
 1749   OC   4 54.6   -68  12  r   Dor                  vF,  R,  p  of  2
 1756   OC   4 54.6   -69  15  r   Dor                  vF,  S,  R
I2114        4 54.6   -69  12  x   Dor                  PN  ,  stellar;  =  1748
 1747   C+N  4 54.9   -67  11  r   Dor                  Cl,  pS,  lRi,  st  vS
 1755   OC   4 55.0   -68  11  s   Dor    2.     9.9   vB,  pL,  R,  gbM,  f  of  2
 1694   Gx   4 55.2   -04  39  r   Eri          15.  p  vF,  vS,  R,  sbM
 1692   Gx   4 55.4   -20  34  c   Lep    1.3           eF,  vS,  R
 1701   Gx   4 55.8   -29  53  r   Cae          14.  p  F,  S,  vlE,  glbM,  *10  75"  sf
 1766   OC   4 55.8   -70  14  r   Men                  cF,  S,  gbM
 1777   OC   4 55.8   -74  17  r   Men                  eF,  E,  **  9  att,  f
 1764   OC   4 56.2   -67  41  r   Dor                  vF,  S,  R
 1767   C+N  4 56.3   -69  24  r   Dor                  no  descr  (in  LMC)
 1761   C+N  4 56.4   -66  30  r   Dor                  Cl,  L,  mC,  **   9m
 1760   C+N  4 56.5   -66  32  r   Dor                  vF,  S,  3  vS  st  inv
I2104   Gx   4 56.5   -15  47  v   Lep    2.2           F,  E,  gbM
I2106   Gx   4 56.6   -28  30  c   Cae    2.0           eeF,  pL,  D*  24s   f
 1768   OC   4 56.7   -68  15  r   Dor                  F,  S,  R,  gbM
 1772   C+N  4 56.7   -69  34  r   Dor                  pB,  pS,  iR,  rr
 1763   Nb   4 56.8   -66  24  s   Dor   25.            vB,  vL,  vimE
 1775   OC   4 56.8   -70  26  r   Men                  eF,  pL,  iR
 1700   Gx   4 56.9   -04  52  s   Eri    2.9   11.0   cB,  S,  mbM*
 1699   Gx   4 57.0   -04  45  s   Eri    1.1   15.  p  eeF,  pS,  R,  bet  2  st,  n  of  1700
 1770   C+N  4 57.0   -68  25  r   Dor          9.  p  Cl  +  neb,  pL,  pRi,  st  11...18
I2115   Nb   4 57.1   -66  24  x   Dor                  PN  ,  stellar
I2117   Nb   4 57.2   -68  27  x   Dor                  PN  ,  stellar
 1710   Gx   4 57.3   -15  18  D   Lep          14.  p  vF,  vS,  R,  bMN,  *13  inv
I2108   Gx   4 57.3   -15  17  m   Lep    1.2   14.  p  vF,  pS,  R,  mbM,  *9.5  sf  1'.3
I 391   Gx   4 57.4   +78  11  s   Cam    1.7   12.7   F,  S,  R
I2116   Nb   4 57.4   -66  25  x   Dor                  PN  ,  stellar
 1782   C+N  4 57.6   -69  23  r   Dor                  glob.  cl.  ,  pB,  S,  R,  pmbM,  rr
 1769   C+N  4 57.7   -66  28  r   Dor                  B,  L,  iR,  vsmbM  **  10
 1774   OC   4 57.8   -67  15  r   Dor          10.  p  B,  S,  R,  smbM,  **   +  neb
 1789   OC   4 57.8   -71  54  r   Men                  vF,  pS,  R,  vglbM
I 396   Gx   4 58.0   +68  19  s   Cam    3.0   13.  p  F,  S,  R,  bMN,  FD*  sf
I 398   Gx   4 58.2   -07  47  v   Eri    1.5           eF,  pL,  E  5deg  ,  dif
 1773   C+N  4 58.3   -66  21  r   Dor                  pF,  pL,  iR,  2  or  3  B  st  nr
I2107    ?   4 58.3   +08  15  x   Ori                  Cl,  vF,  vS,  R
 1716   Gx   4 58.4   -20  24  r   Lep          14.  p  pF,  pL,  R,  glbM
 1765   Gx   4 58.4   -62  02  r   Dor                  cF,  S,  R,  glbM
 1776   OC   4 58.4   -66  26  r   Dor                  vF,  S,  R,  gbM
 1785    -   4 58.6   -68  52  r   Dor                  no  descr,  in  LMC
 1709   Gx   4 58.8   -00  29  r   Ori          15.  p  vF,  vS,  np  1713
 1707    -   4 58.9   +08  14  r   Ori                  S,  R,  rrr;  =  IC  2107
 1713   Gx   4 58.9   -00  30  r   Ori          14.  p  F,  S,  R,  bM
 1771   Gx   4 58.9   -63  18  v   Dor                  vF,  mE,  glbM,  *7-  8  np
 1783   Gb   4 58.9   -66  00  r   Dor          11.  p  cB,  L,  R,  vgpmbM,  r
 1791   Nb   4 59.0   -70  10  r   Men                  eF,  S,  R
I2109        4 59.0   -00  19  d   Ori                  vF*,  nebs?
I2110        4 59.0   -00  19  d   Ori                  vF*,  nebs?
 1786   Gb   4 59.1   -67  45  s   Dor    1.2   10.1   vB,  pS,  lE,  vsvnbM  *9
 1787   OC   4 59.1   -65  44  r   Dor                  Cl,  vL,  pRi
 1717    *   4 59.2   -00  15  A   Ori                  np  1719  (F*?)
 1721   Gx   4 59.2   -11  08  r   Eri          13.  p  vF,  vS,  R
 1720   Gx   4 59.3   -07  52  s   Eri    1.8   13.  p  pF,  pL,  lbM,  1726  nr
 1725   Gx   4 59.3   -11  08  D   Eri          13.  p  eF,  vS,  R
 1723   Gx   4 59.4   -10  59  s   Eri    3.7   12.  p  F,  bet  2  st  9-10  n  &  s,  3rd  *  f
 1728   Gx   4 59.4   -11  08  D   Eri          13.  p  vF,  vS,  R
 1793   OC   4 59.4   -69  33  r   Dor                  F,  S,  R,  glbM
 1795   Gb   4 59.5   -69  48  r   Dor                  F,  pL,  lE
 1719   Gx   4 59.6   -00  16  r   Ori          14.  p  pF,  S,  iR,  pslbM
 1730   Gx   4 59.6   -15  50  s   Lep    3.0   13.  p  F,  pS,  lE,  bet  2  F  st
I2113   Gx   4 59.6   -15  50  m   Lep    2.3   13.  p  no  descr
 1726   Gx   4 59.7   -07  45  s   Eri    1.4   12.1   F,  R,  *13,  s
 1744   Gx   5 00.0   -26  01  s   Lep    6.8   11.2   F,  vL,  vmE,  vgvlbM
 1729   Gx   5 00.1   -03  21  r   Ori          13.  p  vF,  pL,  2  B  st  vnr
 1801   OC   5 00.5   -69  38  r   Dor                  F,  pL,  R,  vglbM,  p  of  2
I2112   Gx   5 00.5   +04  23  z   Ori          15.  p  vF,  pS,  dif
 1759   Gx   5 00.8   -38  43  r   Cae                  vF,  pL,  vglbM
 1804   OC   5 00.9   -69  05  r   Dor                  F,  S,  R,  bM
I 397        5 01.1   +40  26  d   Aur                  F,  S
 1741   Gx   5 01.6   -04  16  s   Eri    1.7   13.4   vF,  vS,  vS  excent  pt  inv;  =  IC  339
 1738   Gx   5 01.7   -18  11  r   Lep          13.  p  vF,  S,  E  45deg
 1739   Gx   5 01.7   -18  12  r   Lep          14.  p  eF,  vS,  lE,  in  field  with  1738
 1742    *   5 01.7   -03  18  F   Ori                  vF,  vS,  3s  .6  f  1740
I 399   Gx   5 01.8   -04  18  s   Eri          14.5   vF,  vS,  sf  of  1741
 1740   Gx   5 01.9   -03  18  r   Ori          15.  p  eF,  vS,  *12  sp
 1806   Gb   5 01.9   -67  59  r   Dor          11.  p  pB,  L,  gbM
 1809   Gx   5 02.0   -69  34  r   Dor                  pF,  S,  R,  gbM,  2nd  of  2
 1752   Gx   5 02.1   -08  14  s   Eri    2.6   13.  p  F,  pL,  pmE,  2  or  3  st  11  nf
 1805   OC   5 02.2   -66  06  r   Dor          10.  p  B,  vS,  vsmbM,  st  +  neb
 1815   OC   5 02.3   -70  37  r   Men                  F,  vS,  R,  vlbM,  am  st
 1753   Gx   5 02.4   -03  21  r   Ori          15.  p  eeF,  pS,  R,  sf  1740
 1708    -   5 02.6   +52  53  r   Cam                  Cl,  vL,  pRi,  lC,  st  L  &  S
 1757    -   5 02.6   -04  44  r   Eri                  vL  dif  neb  in  zigzags??
 1813   OC   5 02.6   -70  19  r   Men                  vF,  S,  R,  r
 1796   Gx   5 02.7   -61  08  s   Dor    2.0   13.  p  pF,  pS,  pmE,  vglbM
 1544   Gx   5 03.    +86  13  r   Cep          14.  p  vF,  vS
 1810   OC   5 03.1   -66  22  r   Dor                  cF,  S,  R,  lbM,  glob.  cl.   f
 1724   OC   5 03.5   +49  30  o   Aur          10.  p  Cl,  vS,  st  +  neb?
 1823   OC   5 03.5   -70  21  r   Men                  Cl,  pF,  L,  iF,  st  12...15
 1746   OC   5 03.6   +23  49  s   Tau   42.     6.  p  Cl,  P
 1762   Gx   5 03.6   +01  34  r   Ori          13.  p  vF,  vS
I 400        5 03.7   -15  46  d   Lep                  eF,  eS
 1814   C+N  5 03.8   -67  17  r   Dor          9.  p  vF,  R,  s  of  2  in  Cl
 1816   C+N  5 03.8   -67  17  r   Dor          9.  p  vF,  R,  2nd  neb  in  Cl
 1820   OC   5 03.8   -67  17  r   Dor          9.  p  Cl,  pL,  Ri,  C,  iF
 1750   OC   5 03.9   +23  39  s   Tau                  Cl,  st  L,  vc  sc
 1825   OC   5 04.1   -68  55  r   Dor                  no  descr,  in  LMC
 1828   OC   5 04.1   -69  23  r   Dor                  F,  S,  R,  1st  of  3
 1818   OC   5 04.2   -66  24  s   Dor    3.     9.8   glob.  cl.  ,  vB,  pL,  R,  vmC,  rr
 1833   C+N  5 04.3   -70  43  r   Men                  vF,  pL,  1st  of  sev
I 401        5 04.3   -10  05  d   Eri                  vF,  vS,  R,  vSN
 1758   OC   5 04.4   +23  46  r   Tau                  Cl,  pC,  st  L  and  S
 1830   OC   5 04.5   -69  20  r   Dor                  F,  pS,  R,  2nd  of  3
 1829   C+N  5 04.7   -68  03  r   Dor          8.  p  F,  pL,  R,  r
 1837   C+N  5 04.7   -70  42  r   Men                  Cl,  L,  Ri,  st  sc
 1822   OC   5 05.0   -66  12  r   Dor                  vF,  S,  p  of  2
 1792   Gx   5 05.2   -37  59  s   Col    4.0   10.2   vB,  vL,  mE  314deg  ,  glbM,  rr
 1835   Gb   5 05.2   -69  24  s   Dor    1.2    9.8   cB,  S,  R,  gmbM,  3rd  of  3
 1779   Gx   5 05.3   -09  09  s   Eri    2.6   13.  p  pB,  S,  R,  gpmbM
 1834   ***  5 05.3   -69  13  r   Dor                  plan?  B,  eS,  lE
 1836   OC   5 05.3   -68  37  r   Dor                  st  +  neb,  1st  of  sev
 1784   Gx   5 05.4   -11  52  s   Lep    4.2   11.8   pB,  pL,  vlE,  vgbM,  am  st
 1803   Gx   5 05.4   -49  34  c   Pic    1.1           F,  S,  R,  vglbM,  *11  sf;  neb?
 1826   OC   5 05.4   -66  13  r   Dor                  vF,  S,  f  of  2
 1838   OC   5 05.9   -68  27  r   Dor                  Cl,  L,  vlC
 1839   C+N  5 05.9   -68  37  r   Dor                  st  +  neb,  pB,  iF,  2nd  of  sev
 1831   OC   5 06.1   -64  55  r   Dor          11.  p  B,  L,  R,  glbM,  r
 1845   OC   5 06.3   -70  28  r   Men                  Cl,  vlCM,  st  9,  11...16
I 402        5 06.3   -09  08  d   Eri                  eF,  pL,  iR,  dif
 1780   Gx   5 06.4   -19  29  r   Lep          15.  p  eF,  eS,  gbM
 1800   Gx   5 06.4   -31  57  s   Col    1.6   12.6   pB,  pmE,  gpmbM,  *13  f
 1840   OC   5 06.4   -71  49  r   Men                  F,  R,  bM,  r
 1788   Nb   5 06.9   -03  21  s   Ori    8.            B,  cL,  R,  bM  ***  ;  *10  inv  in  the  neby
 1824   Gx   5 06.9   -59  43  r   Dor                  vF,  pL,  vmE  162deg
 1847   OC   5 06.9   -68  59  r   Dor                  B,  S,  lE,  **   in  M
I2118   Nb   5 06.9   -07  13  s   Eri  180.            F,  eL,  iF,  1779  inv  s
 1842   OC   5 07.1   -67  16  r   Dor                  vvF,  R,  p  of  2
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 1844   OC   5 07.2   -67 19 r  Dor                pF,  pL,  R,  gbM,  f of 2
I2119         5 07.2   -20 21 F  Lep                eeF,  pS,  v diffic,  2 st 12.5  nr
 1848  C+N   5 07.3   -71 11 r  Men                Cl,  vlC,  st  9...
 1846   Gb   5 07.6   -67 28 r  Dor          11.  p pB,  cL,  R,  vglbM,  r
 1797   Gx   5 07.7   -08 02 r  Eri          15.  p eeF,  S,  R,  vF* np
 1799   Gx   5 07.7   -07 58 r  Eri          15.  p vF,  vS,  vlE
 1808   Gx   5 07.7   -37 31 s  Col    7.2    9.9   B,  L,  E,  psbM
 1781         5 07.9   -18 10 D  Lep                eF,  vS,  stellar;  = 1794
 1794   Gx   5 07.9   -18 10 D  Lep          14.  p vF,  eS,  gbM
 1778   OC   5 08.1   +37 03 s  Aur    7.     7.7   Cl,  pC,  lRi,  iF,  st L
 1850   OC   5 08.5   -68 46 s  Dor    3.     9.3   glob.  cl.  ! vB,  L,  lE,  vmCM,  rr
 1811   Gx   5 08.7   -29 17 r  Col          15.  p cF,  S,  lE,  p of 2
 1812   Gx   5 08.9   -29 16 r  Col          14.  p F,  S,  R,  glbM,  f of 2
 1852  C+N   5 09.0   -67 47 r  Dor                F,  pL,  R,  vglbM
 1854   OC   5 09.1   -68 51 r  Dor          10.  p glob.  cl.  ,  cB,  S,  R,  gbM,  2nd  of  3
 1849   OC   5 09.2   -66 18 r  Dor                vF,  S,  lE,  glbM
 1855    -   5 09.4   -68 51 r  Dor                Cl,  vB,  L,  R,  st 12;  = 1854?
 1856   OC   5 09.4   -69 08 r  Dor          10.  p B,  pL,  R,  gbM,  12s  diam  RA
 1858  C+N   5 09.7   -68 54 r  Dor                B,  L,  iE,  biN,  Cl  + neb
 1827   Gx   5 10.1   -36 58 t  Col    3.4         vF,  vmE,  long  ray,  *11  inv
 1861   OC   5 10.1   -70 46 r  Men                eF,  pL,  R,  gvlbM
 1802    -   5 10.2   +24 06 r  Tau                Cl,  st  c sc
 1860   OC   5 10.4   -68 46 r  Dor                F,  pL,  R,  vglbM
 1807   OC   5 10.7   +16 32 s  Tau   17.     7.0   Cl,  pRi,  st  L  &  S
 1790    -   5 11.3   +52 04 r  Aur                Cl,  group  of  8 or 9 st 10
 1859   OC   5 11.4   -65 13 r  Dor                F,  S,  R,  vgbM,  *7 nf 6'
 1863   OC   5 11.4   -68 47 r  Dor                vB,  vS,  R,  r or stellar
 1798    -   5 11.6   +47 40 r  Aur                S,  Cl or Cl + neb
 1819   Gx   5 11.7   +05 12 r  Ori          13.  p vF,  S,  R
 1821   Gx   5 11.7   -15 07 r  Lep          14.  p vF,  vS,  lE
 1817   OC   5 12.1   +16 42 s  Tau   16.     7.7   Cl,  L,  Ri,  lC,  st  11...14
 1832   Gx   5 12.1   -15 41 s  Lep    2.8   11.4   pB,  iR,  mbM,  c*  nf  1'
 1862   OC   5 12.2   -66 08 r  Dor                pF,  L,  iR,  vgbM,  r
 1865   OC   5 12.2   -68 47 r  Dor                vF,  pL,  R,  vglbM
 1853   Gx   5 12.3   -57 24 c  Dor    2.0         F,  S,  mE  45deg  ,  vgvlbM,  *11  nf
 1864   OC   5 12.5   -67 38 r  Dor                F,  pS,  iR,  bM,  r or stellar
 1878   OC   5 12.6   -70 28 r  Men                vF,  lE,  gvlbM,  R
 1870   OC   5 13.0   -69 08 r  Dor                B,  S,  R,  glbM
 1872  C+N   5 13.0   -69 20 r  Dor                pB,  R,  gbM,  1st  of  group
 1874  C+N   5 13.2   -69 23 r  Dor                neb  and  Cl,  biN
 1876  C+N   5 13.2   -69 23 r  Dor                pB,  iR,  biN,  2nd  in  group
 1877  C+N   5 13.2   -69 23 r  Dor                vF,  3rd  of  group  in  Cl
 1881  C+N   5 13.2   -69 21 r  Dor                vF,  **  p
I 404   Gx   5 13.3   +09 45 z  Ori          16.  p vF,  vS,  stellar,  *13  close
 1866   OC   5 13.5   -65 28 s  Dor    5.     9.8   vB,  L,  R,  vgmbM,  r
 1867   OC   5 13.5   -66 17 r  Dor                eF,  pL,  R
 1880  C+N   5 13.6   -69 23 r  Dor                4th  of  group  in  Cl
 1871  C+N   5 13.7   -67 28 r  Dor                Cl,  lRi,  2nd  of  sev
 1873  C+N   5 13.7   -67 20 r  Dor                Cl,  3rd  of  sev
 1869  C+N   5 13.8   -67 23 r  Dor                Cl,  L,  pRi,  st  sc
 1890   OC   5 13.9   -72 04 r  Men                vF,  S,  R,  glbM
 1843   Gx   5 14.1   -10 38 t  Ori    1.8         F,  S,  R,  lbM
 1851   Gb   5 14.1   -40 03 s  Col   11.0    7.3   glob.  cl.  !  vB,  vL,  R,  vsvvbM,  rrr
 1868   Gb   5 14.5   -63 57 r  Dor                pB,  pL,  R,  vglbM
 1885   OC   5 15.0   -68 58 r  Dor                pB,  vS,  R,  bM
 1882   OC   5 15.2   -66 07 r  Dor                pF,  R,  vgvlbM,  r
I 403         5 15.3   +39 58 d  Aur                eF,  eS,  R
 1894   OC   5 15.7   -69 27 r  Dor                F,  pL,  R,  sbM,  r,  st inv
 1887   OC   5 15.8   -66 18 r  Dor                vF,  vS,  R,  * p 25"
 1884    -   5 15.9   -66 10 r  Dor                eF,  pL
I 405   Nb   5 16.2   +34 16 s  Aur   30.          *6.7  with  pB,  vL  neb
 1898   Gb   5 16.7   -69 36 r  Dor          11.  p F,  pS,  R
 1895   Nb   5 16.9   -67 19 r  Dor                pF,  pL,  R,  gvlbM
 1892   Gx   5 17.1   -64 57 r  Dor                cF,  pL,  E  90deg  +/-  ,  vglbM
 1903   OC   5 17.2   -69 18 r  Dor          12.  p vB,  S,  R,  gmbM
 1897   OC   5 17.4   -67 26 r  Dor                eF,  S,  R
 1916   OC   5 17.5   -69 22 r  Dor                B,  S,  R,  vgvmbM,  r
 1914  C+N   5 17.6   -71 14 r  Men                F,  L,  iE
I 407         5 17.7   -15 31 d  Lep                F,  lE  ns
 1899   Nb   5 17.8   -67 53 r  Dor                F,  pS,  R,  vglbM,  3 st 10  p
 1901   OC   5 17.8   -68 26 r  Dor                Cl,  bM,  lRi,  st  7...
I 406   OC   5 17.8   +39 53 x  Aur                eF,  neb  or  eS  neb  Cl
I 408         5 17.9   -25 05 d  Lep                vF,  pS,  E,  *8.5  south  5'
 1902   OC   5 18.1   -66 37 r  Dor                glob.  cl.  ,  pB,  pL,  R,  pmbM,  rr
 1910   OC   5 18.1   -69 13 s  Dor    1.          Cl,  L,  pRi,  iR,  st  11...16
 1905   OC   5 18.2   -67 15 r  Dor                F,  S,  R,  r
I2120   Pl   5 18.2   +37 36 s  Aur    0.8         eF
 1913   OC   5 18.4   -69 33 r  Dor                no  descr,  in  LMC
 1900   OC   5 19.0   -63 02 r  Dor                F,  pL,  lE,  vgvlbM,  *7  np
 1917   Gb   5 19.0   -69 00 r  Dor                vF,  L,  R,  vglbM
I2122   Gx   5 19.0   -37 05 c  Col    2.0         pB,  eS,  R,  3 st nf
 1918  C+N   5 19.1   -69 39 r  Dor                no  descr,  in  LMC
 1911    -   5 19.2   -66 46 r  Dor                F,  R,  gbM,  am  st
 1921   Nb   5 19.3   -69 48 r  Dor                vF,  pS,  lE,  r
 1915    -   5 19.6   -66 48 r  Dor                eF,  pL
I 409   Gx   5 19.6   +03 18 m  Ori    0.6   15.  p pB,  R,  biN?
 1922   OC   5 19.7   -69 29 r  Dor                no  descr,  in  LMC
 1956   Gx   5 19.7   -77 45 r  Men                vF,  hazy  *  inv  in  neb
I2121   Gx   5 19.7   -25 04 c  Lep    2.1         eef,  S,  R,  v  diffic,  *7  p  14s  ,  3'.6  s
 1879   Gx   5 19.8   -32 09 s  Col    2.2   13.  p vF,  L,  R,  vgvlbM,  *12  p
 1919  C+N   5 20.0   -66 55 r  Dor                Cl,  eF,  L,  iR,  mC,  rr
 1857   OC   5 20.2   +39 21 s  Aur    6.     7.0   Cl,  pRi,  pC,  st  7...
I 411   Gx   5 20.3   -25 20 m  Lep    0.5   15.  p vF,  vS,  R,  2  others  in  field
 1926   OC   5 20.5   -69 30 r  Dor                pB,  pL,  iR,  r,  in  dif  n
 1920   Nb   5 20.6   -66 48 r  Dor                pB,  pL,  R,  vgbM
 1928   OC   5 20.8   -69 29 r  Dor                pF,  pL,  R,  gbM
 1923  C+N   5 21.0   -65 30 r  Dor                vF,  pS,  R
 1891    -   5 21.3   -35 44 r  Col                Cl,  L,  sc,  **  taken
I 415         5 21.3   -15 33 d  Lep                vF,  vS,  R,  dif
 1938   OC   5 21.4   -69 55 r  Men                pB,  pS,  R,  glbM,  D  with  1939,  pos  339deg
 1939   OC   5 21.4   -69 56 r  Men                F,  S,  R,  glbM,  D  with  1938
 1929  C+N   5 21.6   -67 56 d  Dor                F,  p  of  group
 1875   Gx   5 21.8   +06 41 s  Ori          15.  p eF,  S,  R
 1886   Gx   5 21.8   -23 49 c  Lep    2.6         vF,  pL,  E  240deg  ,  *9  p  11s  ,  0'.9  s
 1925  C+N   5 21.8   -65 48 r  Dor                Cl,  vlRi,  lC,  st  10
 1934  C+N   5 21.8   -67 56 r  Dor                2nd  neb  of  group
 1935  C+N   5 21.9   -67 58 r  Dor                pF,  S,  R,  3rd  of  group;  = IC 2126
 1944   OC   5 21.9   -72 30 r  Men                pB,  pL,  R,  bM
I 412   Gx   5 21.9   +03 29 u  Ori    1.6   14.  p vF,  vS,  stellar,  IC  413  at  pos  115deg  ,
    dist 36"
I 414   Gx   5 21.9   +03 20 m  Ori    0.4   15.  p eF,  *9  sf  2'
I2123         5 21.9   +03 30 d  Ori                vS,  R,  mbM,  S*  close  n
I2124         5 21.9   +03 30 d  Ori                vS,  R,  mbM,  S*  close  n
I2126         5 21.9   -67 57 x  Dor                PN  ,  stellar;  = 1935
I2127         5 21.9   -67 58 x  Dor                PN  stellar;  = 1936
I 413   Gx   5 22.0   +03 29 u  Ori    1.2   14.  p eF,  vS,  stellar
 1936  C+N   5 22.1   -67 59 r  Dor                !,  pB,  S,  R,  4th  of  group;  = IC 2127
 1933   OC   5 22.2   -66 09 D  Dor                eF,  R,  stellar,  D  with  1932
 1937  C+N   5 22.3   -67 55 r  Dor                vF,  pL,  follows  a  group
 1932   OC   5 22.4   -66 09 D  Dor                pB,  S,  R,  smbM,  D  with  1933,  pos  260deg  ,
    80"
 1888   Gx   5 22.5   -11 30 s  Lep    3.0   12.0   pB,  pL,  R,  r
 1889   Gx   5 22.5   -11 29 s  Lep    0.8   14.  p makes  a  close  0neb  with  1888
 1940   OC   5 22.6   -67 12 r  Dor                pB,  vS,  R,  bM,  2 st 9 & 10 f
 2012   Gx   5 22.6   -79 51 c  Men    1.5         vF,  S,  lE,  bM,  2 st 9 nf
I 410  C+N   5 22.6   +33 31 s  Aur   40.          dif,  many  st  inv
 1893   OC   5 22.7   +33 24 s  Aur   11.     7.5   Cl,  L,  Ri,  lC
 1943  C+N   5 22.7   -70 10 r  Men          12.  p pF,  pS,  iR,  vglbM,  *15  at  191deg  ,  60"
I2128   Nb   5 22.8   -68 03 x  Dor                Cl,  few  st  and  neb  (in  LMC)
I2134         5 23.0   -75 27 d  Men                cF,  vS
 1941   Nb   5 23.1   -66 23 r  Dor                vS,  neb  +  st

I 416   Gx   5 23.9   -17 16 c  Lep    1.7         F,  S,  gbM
I2125         5 24.4   -26 59 d  Lep                eeF,  vS,  R,  v  diffic
 1904   Gb   5 24.5   -24 33 s  Lep    8.7    8.0   glob.  cl.  ,  pL,  eRi,  eC,  rrr;  = M79
 1950   OC   5 24.5   -69 57 r  Men                the  1st  of  a  group  of  7!
 1942   OC   5 24.7   -63 56 r  Dor                eF,  stell,  *14  +  neb
 1906         5 24.8   -15 58 D  Lep                eF,  pS,  E  0deg  ,  glbM
 1946   OC   5 25.1   -66 25 r  Dor                pF,  R,  gbM,  r
 1949   Nb   5 25.1   -68 29 r  Dor                pB,  S,  R,  psbM
 1896    -   5 25.4   +20 10 r  Tau                Cl,  vL,  Ri,  vlC,  st  9...12
 1945   Nb   5 25.4   -66 21 r  Dor                eeeF,  vvL,  irr  dif
 1953   Gb   5 25.4   -68 48 r  Dor                pB,  S,  R,  glbM
 1948  C+N   5 25.5   -66 15 r  Dor                Cl,  cL,  Ri,  st  13
 1958   OC   5 25.5   -69 50 r  Dor                F,  pL,  iR,  vgbM,  2nd  of  group!
 1959   OC   5 25.8   -69 56 r  Men                F,  vL,  vgbM,  3rd  of  group!
 1883   OC   5 25.9   +46 33 s  Aur    3.    12.  p Cl,  vF,  pRi,  pC,  iF
 1909    -   5 25.9   -08 08 r  Ori                eL,  strongly  susp  (2deg   in  decl)
 1930   Gx   5 25.9   -46 44 r  Pic                pF,  S,  R,  bM,  4  B  st  p
 1951   OC   5 25.9   -66 36 r  Dor          10.  p B,  lE,  sbM  **  10  &  11
 1908    -   5 26.0   -02 32 r  Ori                v  diffused  neb  susp
 1955  C+N   5 26.1   -67 29 r  Dor           9.  p Cl,  Ri,  2nd  of  sev
 1962  C+N   5 26.5   -68 47 r  Dor           8.  p vF,  pL,  R,  1st  of  4!
 1965  C+N   5 26.5   -68 47 r  Dor           8.  p F,  S,  2nd  of  4!
 1967   OC   5 26.5   -69 04 r  Dor                no  descr,  in  LMC
 1969   OC   5 26.5   -69 49 r  Dor                F,  S,  4th  of  gr  of  7
 1970  C+N   5 26.5   -68 47 r  Dor           8.  p 4th  of  4
 1971   OC   5 26.7   -69 51 r  Dor                5th  of  gr  of  7
 1972   OC   5 26.7   -69 49 r  Dor                6th  of  gr  of  7!  D,  a  vS  neb  np
 1947   Gx   5 26.8   -63 46 s  Dor    3.0   10.8   pB,  L,  R,  glbM,  *9  np
 1966   Nb   5 26.8   -68 49 s  Dor   13.          pB,  R,  pslbM,  3rd  of  4,  in  pL,  irr  Cl
 1968  C+N   5 27.2   -67 26 r  Dor           9.  p Cl,  Ri,  3rd  of  sev
 1987   Gb   5 27.2   -70 46 r  Men          12.  p F,  L,  iR,  3  st  p
 2000   OC   5 27.4   -71 55 r  Men                F,  pL,  R,  vlbM
 1983  C+N   5 27.5   -68 57 r  Dor           8.  p Cl,  vL,  pRi,  iF
 1984  C+N   5 27.5   -69 06 r  Dor                Cl,  place  of  **
 1986   OC   5 27.5   -69 58 r  Men          11.  p B,  pL,  R,  gbM
I 418   Pl   5 27.5   -12 42 s  Lep    0.2   11.  p plan  =  *9.2  (gaseous  sp)
 1924   Gx   5 27.9   -05 19 r  Ori          13.  p vF,  pL,  iR,  st  nr
 1974  C+N   5 27.9   -67 24 r  Dor           9.  p Cl,  L,  irr
 1907   OC   5 28.0   +35 19 s  Aur    7.     8.2   Cl,  pRi,  pC,  R,  st  9...12
I 417   Nb   5 28.1   +34 26 s  Aur   13.          vL,  dif,  *6  inv
 1994   OC   5 28.2   -69 07 r  Dor                Cl,  eS,  st  11...16
 1978   Gb   5 28.6   -66 14 s  Dor    2.7    9.9   vB,  vL,  lE,  vgpnbM
 1912   OC   5 28.7   +35 50 s  Aur   21.     6.4   Cl,  B,  vL,  vRi,  iF,  st  L  &  S;  = M38
 1927    -   5 28.7   -08 23 r  Ori                diffused  nebulosity
 1991    -   5 29.0   -67 26 r  Dor                Cl,  4th  of  sev
 2001  C+N   5 29.1   -68 44 r  Dor                Cl,  st  13m
 2005   OC   5 30.0   -69 44 r  Dor                no  description,  in  LMC
 2002   OC   5 30.2   -66 52 r  Dor                vB,  S,  R,  **  +  neb  in  vLCl
 1997   OC   5 30.5   -63 12 r  Dor                eF,  cS,  R
 2004   OC   5 30.6   -67 17 s  Dor           9.8  glob.  cl.  ,  B,  pL,  pRi,  C,  st  12
 2010   OC   5 30.6   -70 49 r  Men                F,  cL,  R,  vglbM
 2018   Nb   5 30.6   -71 04 s  Men   25.          pB,  pL,  R,  pglbM,  *10  p  inv
 2003   OC   5 30.7   -66 27 r  Dor                B,  S,  stellar,  r
 2009   OC   5 30.8   -69 09 r  Dor                pF,  pS,  R,  glbM,  in  Cl
I 419         5 31.0   +30 09 d  Aur                pB,  L,  mE
 2006   OC   5 31.2   -66 57 r  Dor                Cl,  eL,  vRi,  vBvSNM
I2129         5 31.3   -23 04 d  Lep                eeF,  pS,  R,  *7  ssf
 1931  C+N   5 31.4   +34 15 s  Aur    3.    11.3   vB,  L,  R,  B***  in  M
 2016   OC   5 31.5   -69 56 r  Men                F,  vL,  iR,  gbM
 2019   Gb   5 31.7   -70 10 r  Men          11.  p B,  pL,  gbM
I2130   Gx   5 31.8   -23 09 c  Lep    2.2         eF,  pL,  R,  *7.5  nf
 2015  C+N   5 31.9   -69 13 r  Dor                Cl,  vL,  Ri,  vlC
 2011  C+N   5 32.1   -67 31 r  Dor           9.  p vB,  S,  R,  psmbM
 2014  C+N   5 32.2   -67 40 r  Dor           8.  p Cl,  pL,  pC,  iF,  st  9...15
I 421         5 32.2   -08 05 d  Ori                vF,  L
I 420         5 32.3   -04 30 d  Ori                vF,  spp  *9  (not  verified)
I 422         5 32.3   -17 13 d  Lep                pB,  vS,  R,  sbM
I2131         5 32.3   -17 13 d  Lep                pB,  vS,  R
 1995   D*   5 32.5   -48 42 A  Pic                eeF,  R,  bM,  diffic,  p  of  2
I2132   Gx   5 32.5   -13 55 m  Lep    1.3   14.  p vF,  S
 1954   Gx   5 32.8   -14 04 s  Lep    4.1   13.  p vF,  S,  R,  smbM
 1957   Gx   5 32.9   -14 07 A  Lep                eF,  pS,  R,  bMN,  *15  inv
 2020   Nb   5 33.1   -67 42 r  Dor                F,  vL,  vlE,  vglbM
 2025   OC   5 33.1   -71 44 r  Men                vB,  vS,  lE,  gmbM,  r
I2142         5 33.1   -78 00 d  Men                eF,  vS,  lE  25deg  ,  lbM
I2135   Gx   5 33.2   -36 24 c  Col    2.5         eeF,  eS,  eE,  v  diffic
I2136   Gx   5 33.2   -36 24 c  Col    2.5         eF,  pS,  eE;  = IC 2135
I2140   OC   5 33.2   -75 22 x  Men                eF,  vS;  eS  Cl?
 1963   Gx   5 33.3   -36 25 t  Col    3.5         Cl,  st  8...11
 1998   Gx   5 33.3   -48 41 A  Pic                vF,  R,  gbM,  st  s,  f  of  2
 1964   Gx   5 33.4   -21 57 s  Lep    6.2   10.8   F,  L,  R,  vsvmbM  *12,  3  st  inv
 2021  C+N   5 33.4   -67 26 r  Dor                vF,  S,  R,  in  pLCl
I 423   Nb   5 33.4   -00 37 s  Ori    6.          vF,  L,  oval  ring
 2028   OC   5 33.7   -69 56 r  Men                vF
 2031   OC   5 33.7   -70 59 r  Men                glob.  cl.  ,  B,  pL,  R,  gbM,  rr
I 424         5 33.7   -00 19 d  Ori                vF,  L,  brightest  f
 1979   Gx   5 33.8   -23 19 r  Lep          13.  p vF,  vS,  stellar;  = IC 2137
I2137         5 34.3   -23 20 d  Lep                eF,  vS,  R,  *8  f  10s  ,  1979  nr
I2138   Gx   5 34.3   -23 33 m  Lep    1.0   14.  p eF,  S,  2  st  inv  0'.5  apart,  *7  p
 1989   Gx   5 34.4   -30 48 c  Col    1.8         vF,  S,  R,  lbM,  st  nr
 2036   OC   5 34.4   -70 04 r  Men                vF,  pL,  R,  gbM
 1952   Nb   5 34.5   +22 01 s  Tau    6.     8.4   vB,  vL,  E  135deg  +/-  ,  vglbM,  r;  = M1
 1992   Gx   5 34.5   -30 56 r  Col          15.  p eeF,  vS
 2033  C+N   5 34.5   -69 44 r  Dor                Cl,  in  LMC
 2038   OC   5 34.5   -70 33 r  Men                pB,  S,  R,  gbM,  *9  np  5'
 2037  C+N   5 34.7   -69 45 r  Dor                Cl,  in  LMC
 2007   Gx   5 35.0   -50 56 r  Pic                eF,  pL,  R
 1973   Nb   5 35.1   -04 44 s  Ori    5.          *8- 9 inv in neb (1977)
 2008   Gx   5 35.1   -50 59 r  Pic                eF,  pL,  R,  vlbM
 2027  C+N   5 35.1   -66 55 r  Dor                Cl,  vL,  Ri,  st  9...11
 1981   OC   5 35.2   -04 26 s  Ori   25.     4.6   Cl,  vB,  lRi,  st  L,  sc
 2048   Nb   5 35.2   -69 46 s  Dor   18.          vF,  L,  pmE
 2032  C+N   5 35.3   -67 34 r  Dor                B,  L,  E,  2nd  of  3
 2035  C+N   5 35.3   -67 34 r  Dor                B,  L,  R,  bM,  3rd  of  3
 2046   OC   5 35.3   -70 14 r  Men                vF,  R,  gbM,  1st  of  7
I2139  ***   5 35.3   -17 56 F  Lep                Cl,  vvS  (12"),  looks  nebs
 1975   Nb   5 35.4   -04 41 s  Ori   10.          B**  inv  in  neb  (1977)
 1976   Nb   5 35.4   -05 27 s  Ori   66.     4.   !!!  theta1  Ori  and  the  great  neb;  = M42
 1980   Nb   5 35.4   -05 54 s  Ori   14.          vF,  vvL,  44  Ori  inv
 2029  C+N   5 35.4   -67 33 r  Dor                pB,  pL,  R,  gbM,  in  cLCl
 2030  C+N   5 35.4   -66 01 r  Dor                pB,  L,  iR,  gbM,  1st  of  3
 1977   Nb   5 35.5   -04 52 s  Ori   20.          !!,  42  Ori  and  neb
 1993   Gx   5 35.5   -17 49 r  Lep          14.  p eF,  vS,  stellar
 1982   Nb   5 35.6   -05 16 s  Ori   20.     9.   !  vB,  vL,  R  with  tail,  mbM  *8- 9;  = M43
 2047   OC   5 35.6   -70 11 r  Men                F,  S,  lE,  2nd  of  7
 2034  C+N   5 35.7   -66 56 r  Dor                Cl,  vL,  Ri
 2042  C+N   5 35.8   -68 54 r  Dor                Cl,  vL,  Ri,  st  12...15
 2044  C+N   5 35.9   -69 11 r  Dor                Cl,  in  LMC
 1960   OC   5 36.1   +34 08 s  Aur   12.     6.0   Cl,  B,  vL,  vRi,  lC,  st  9...11  sc;  = M36
 2040  C+N   5 36.1   -67 33 r  Dor                F,  L,  iR,  glbM,  r
 1990   Nb   5 36.2   -01 12 s  Ori   50.          !!!,  eL,  E,  epsilon  Ori  inv  p
 2043    -   5 36.2   -70 05 r  Men                S,  E  group  of  F  st  inv  in  F  neby
 2051   OC   5 36.2   -71 00 r  Men                pB,  S,  R,  gbM
 2041   OC   5 36.4   -66 58 r  Dor          10.  p B,  S,  R,  vglbM
 1999   Nb   5 36.5   -06 42 s  Ori   16.          *10- 11 inv in neb
 2050  C+N   5 36.5   -69 22 r  Dor                Cl  +  neb,  mC,  iF,  st  vS
 2056   OC   5 36.5   -70 40 r  Men                pB,  R,  bM,  p  of  2,  *9  bet
 2058   OC   5 36.6   -70 08 r  Men          12.  p vB,  pL,  R,  gbM,  4th  of  7
I 427         5 36.6   -06 40 d  Ori                L,  prob  conn  with  Great  Neb
I 428         5 36.6   -06 31 d  Ori                L,  prob  conn  with  Great  Neb
 2057   OC   5 36.7   -70 15 r  Men                pF,  S,  R,  gbM,  3rd  of  7
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 2059   OC   5 36.7   -70  06  r  Men                 vF,  5th  of  7
I 426   Nb   5 36.8   -00  15  s  Ori    5.           vF,  5' diam
 2055   C+N  5 37.0   -69  24  r  Dor                 Cl,  vL,  Ri,  st  10...15
I 425          5 37.1   +32  26  d  Aur                 F,  vvL
 2052   Nb   5 37.3   -69  45  r  Dor                 eF,  vvS,  vglbM
 2053   OC   5 37.3   -67  24  r  Dor                 F,  pL,  lE,  gbM
 2065   OC   5 37.3   -70  13  r  Men          11.  p B,  R,  6th  of  7
 1988    *   5 37.5   +21  14  r  Tau                 !!!,  variable  (?)
 2066   OC   5 37.5   -70  10  r  Men                 vF,  vS,  E,  7th  of  7
 2060   C+N  5 37.6   -69  10  r  Dor                 neb,  no  descrip,  in  LMC
 1985   Nb   5 37.7   +32  00  A  Aur                 cF,  S,  R,  psbM
I2146   OC   5 37.8   -74  46  x  Men                 Cl,  vF,  bet  2  st
 2072   OC   5 38.1   -70  14  r  Men                 vF,  S
 1996    -   5 38.2   +25  49  r  Tau                 Cl,  L,  lC,  lRi
 2075   C+N  5 38.2   -70  40  r  Men                 B,  R,  bM,  rr,  f  of  2
I 429          5 38.3   -07  03  d  Ori                 vF,  vS,  R  (inv  in  f one?)
 2069   Nb   5 38.5   -69  05  r  Dor                 F,  L,  E
I 430   Nb   5 38.5   -07  05  s  Ori   11.           neb  band  10'  l,  np  *5
 2070   C+N  5 38.6   -69  05  s  Dor   40.     8.2   !!!  vB,  vL,  looped
 2074   C+N  5 38.9   -69  29  d  Dor                 pB,  pL,  mE,  5  st  inv
I2148          5 39.2   -75  31  d  Men                 vF,  vS,  bM
 2017    -   5 39.4   -17  51  r  Lep                 Cl  of  L  st
 2077   C+N  5 39.6   -69  40  d  Dor   15.           F,  R,  p  of  Dneb
 2078   C+N  5 39.6   -69  45  d  Dor                 neb,  np  of  gr  of  7
 2079   C+N  5 39.6   -69  47  d  Dor                 neb,  sp  of  gr  of  7
 2080   C+N  5 39.7   -69  39  d  Dor                 B,  R,  f  of  Dneb
 2083   C+N  5 39.9   -69  45  r  Dor                 neb,  nf  of  gr  of  7
 2084   C+N  5 39.9   -69  45  r  Dor                 neb,  sf  of  gr  of  7
 2062   OC   5 40.0   -66  53  r  Dor                 vF,  pS,  E,  glbM,  2  st  10  s
 2081   C+N  5 40.1   -69  24  r  Dor                 Cl,  vF,  mC,  st  +  neb
 2085   C+N  5 40.2   -69  39  r  Dor                 vF,  R,  *10  vnr
I 431   Nb   5 40.3   -01  27  s  Ori    5.           neb  *8.6
 2086   C+N  5 40.4   -69  39  r  Dor                 B,  pS,  R,  lbM,  *10  p
I2145   Nb   5 40.4   -69  40  x  Dor                 PN  ,  stellar
I 433   Gx   5 40.5   -11  38  m  Lep    0.4   14.  p F,  S,  dif,  gbM
 2088   OC   5 40.8   -69  28  r  Dor                 vF,  S,  R
 2091   OC   5 40.9   -69  26  r  Dor                 vF,  S,  mE,  glbM;  D?
I 432   Nb   5 40.9   -01  29  s  Ori    8.           neb,  lE,  *8.4  inv
 2144   Gx   5 41.0   -82  07  c  Men    1.6          F,  pS,  iR,  bM
I 434   Nb   5 41.0   -02  24  s  Ori   60.           neb,  60'  l,  south  from  zeta  Ori
 2092   OC   5 41.5   -69  13  r  Dor                 vF,  pL,  R,  rr
 2093   C+N  5 41.5   -68  55  r  Dor                 vF,  S,  R
 2023   Nb   5 41.6   -02  14  s  Ori   10.           B*  in  M  of  L,  lE  neb
 2103   C+N  5 41.6   -71  20  r  Men                 pB,  L,  pmE,  gbM  *13
 2082   Gx   5 41.8   -64  18  s  Dor    1.6   13.  p pF,  L,  R,  glbM
 2024   Nb   5 41.9   -01  51  d  Ori   30.           !  irr,  B,  vvL,  black  sp  incl
 2100   OC   5 42.0   -69  14  s  Dor    2.     9.6   glob.  cl.  ,  B,  pL,  irr  R,  rr
 1961   Gx   5 42.1   +69  23  s  Cam    4.3   11.1  cF,  pL,  iF,  mbM,  er,  *  inv;  (decl?)
 2022   Pl   5 42.1   +09  05  s  Ori    0.3   12.  p PN  ,  pB,  vS,  vlE
 2094   OC   5 42.1   -68  21  r  Dor                 vF,  S,  R
 2096   OC   5 42.2   -68  28  r  Dor                 neb,  no  descrip,  in  LMC
 2102   OC   5 42.2   -69  29  r  Dor                 neb,  no  descrip,  in  LMC
I2133    ?   5 42.2   +69  23  x  Cam                 vF,  pL,  *13  sf  0'.7
I2141          5 42.3   -51  02  d  Pic                 F,  vS,  R,  bM
 2098   C+N  5 42.5   -68  16  r  Dor                 glob.  cl.  ,  B,  S,  rr
 2095   OC   5 42.7   -67  19  r  Dor                 Cl,  F,  cS,  irr
I 435   Nb   5 43.0   -02  19  s  Ori    5.           neb,  *8.5
 2026    -   5 43.1   +20  07  r  Tau                 Cl,  lRi,  lC,  st  pL
 2107   OC   5 43.2   -70  37  r  Men          11.  p pB,  pS,  R,  gbM
 2049   Gx   5 43.4   -30  06  r  Col          14.  p vF,  S,  R,  bM
 2108   Gb   5 43.8   -69  12  r  Dor                 eF,  pL,  lE
 2061    -   5 43.9   -33  57  r  Col                 Cl,  L,  lC,  st  13
 2039    -   5 44.1   +08  38  r  Ori                 Cl,  vL,  lRi,  lC
 2097   OC   5 44.1   -62  47  r  Dor                 vF,  pS,  iR,  pslbN  *16
 2105   OC   5 44.2   -66  25  r  Dor                 F,  pS,  R,  gbM
 2087   Gx   5 44.3   -55  32  c  Pic    1.1          eF,  pS,  R,  vlbM
 2013    -   5 44.4   +55  48  r  Aur                 Cl,  vlRi,  st  11
 2109   C+N  5 44.4   -68  32  r  Dor                 F,  pS,  R,  vglbM
 2111   OC   5 44.7   -70  57  r  Men                 vF,  S,  R,  gbM
 2045          5 45.0   +12  53  d  Tau                 *8-  9  with  F  neb
 2054   Ast  5 45.2   -10  05  D  Ori                 only  3  S  st  and  no  neb
 2113   C+N  5 45.5   -69  45  r  Dor                 Cl,  F,  S,  iF,  vlC,  rr
 2114   OC   5 45.8   -68  03  r  Dor                 eF,  pL,  iR
 2073   Gx   5 45.9   -21  59  r  Lep          13.  p eF,  vS,  R,  gbM
 2064   Nb   5 46.3   +00  00  s  Ori   12.           eF,  vS,  *9-  10  np  4'
 2101   Gx   5 46.4   -52  05  A  Pic    1.9          eF,  pS,  R,  3  st  10  sp
 2067   Nb   5 46.5   +00  06  s  Ori    8.           F,  pL,  M78  s
 2068   Nb   5 46.7   +00  03  s  Ori    8.     8.    B,  L,  wisp,  gmbN,  3  st  inv,  r;  =  M78
 2063    -   5 46.8   +08  48  r  Ori                 Cl,  poor,  S  sc  st
 2076   Gx   5 46.8   -16  46  r  Lep          14.  p vF,  pS,  iE,  bM
 2116   OC   5 46.9   -68  32  r  Dor                 F,  S,  R,  *11  p
I2143   Gx   5 46.9   -18  44  c  Lep    2.5          eF,  pS,  vmE  45deg  ,  3  st  sf
 2090   Gx   5 47.0   -34  14  s  Col    4.5   12.  p B,  pL,  iR,  gbM,  stell  N,  cE  10deg
 2104   Gx   5 47.1   -51  33  c  Pic    2.0          pB,  pS,  R,  glbM
 2071   Nb   5 47.2   +00  18  s  Ori    4.           D*  (10  &  14m)  with  vF,  L  chev
 2118   OC   5 47.2   -69  09  r  Dor                 glob.  cl.  ,  vB,  vS,  vsmbM,  rr
 2117   OC   5 47.3   -67  28  r  Dor                 F,  pL,  iR,  vlbM,  rrr
 2089   Gx   5 47.8   -17  36  r  Lep          14.  p vF,  eS,  stellar
I2147          5 47.8   -30  30  d  Col                 eeF,  pS,  R,  F*  np
 2121   Gb   5 48.0   -71  28  s  Men    1.8   11.2  vF,  cL,  vglbM
 2122   C+N  5 48.7   -70  04  r  Men                 Cl,  pB,  iF,  gvmCM,  st  15
 2134   OC   5 50.1   -71  07  r  Men          11.  p glob.  cl.  ,  B,  pL,  R,  gmbM,  r
I2144          5 50.2   +23  52  d  Tau                 pF,  eS,  *12  nnp  2',  *12  s  1'
 2120   Gb   5 50.6   -63  41  r  Dor                 cF,  pL,  R,  vglbM
 2106   Gx   5 50.7   -21  35  r  Lep          13.  p vF,  S,  vlE,  gbM
 2125   OC   5 50.7   -69  29  r  Dor                 vF,  pS,  R,  gbM
 2127   OC   5 51.1   -69  22  r  Dor                 pB,  vS,  R,  gmbM
 2115   Gx   5 51.3   -50  35  c  Pic    1.2          eeF,  vS,  3  st  10  sp
I2150   Gx   5 51.3   -38  19  c  Col    2.3          eeF,  S,  vmE,  v  diffic,  3  st  s
 2133   Gb   5 51.4   -71  11  r  Men                 F,  pL,  R,  gpmbM
I 437          5 51.6   -12  34  d  Lep                 vF,  vS,  R,  dif
 2123   OC   5 51.7   -65  19  r  Dor                 pB,  vS,  R,  gbM
 2130   OC   5 52.1   -67  20  r  Dor                 F,  pS,  R,  glbM
 2110   Gx   5 52.2   -07  27  F  Ori          14.  p eF,  cS,  lE,  pslbN,  er
 2099   OC   5 52.4   +32  33  s  Aur   24.     5.6   Cl,  Ri,  pCM,  st  L  &  S;  =  M37
I2151   Gx   5 52.6   -17  47  c  Lep    2.1          eF,  pS,  nr  IC  438
 2136   OC   5 52.8   -69  30  r  Dor          10.  p glob.  cl.  ,  pB,  R,  gmbM,  rr,  st  14...16
I 438   Gx   5 53.0   -17  53  c  Lep    3.2          eeF,  pS,  E  ns,  2  st  p
 2135   OC   5 53.1   -67  26  r  Dor                 F,  pS,  R,  r,  am  st
 2137   OC   5 53.2   -69  29  r  Dor                 vF,  S,  R,  f  of  2
I 436          5 53.7   +38  38  d  Aur                 eF
 2112   OC   5 53.9   +00  24  s  Ori   11.     9.  p Cl,  pL,  lRi,  pC,  st  S
 2140   OC   5 54.0   -68  36  r  Dor                 pF,  pS,  iR,  bM
 2138   OC   5 54.5   -65  50  r  Dor                 eF,  S,  R
 2145   OC   5 54.5   -70  55  r  Men                 F,  lE,  r
 2132   Ast  5 55.2   -59  55  A  Pic                 Cl,  vlC,  st  L  &  S
I2160   Gx   5 55.5   -76  55  c  Men    1.9          vF,  vS,  stell  N
 2161   Gb   5 55.6   -74  21  r  Men                 F,  pL,  R,  gpmbM
 2150   Gx   5 55.9   -69  34  r  Dor                 F,  vS,  R,  vsmbM,  stellar
 2147   C+N  5 56.0   -68  12  r  Dor                 eF,  S,  R,  bM
 2151   OC   5 56.3   -69  01  r  Dor                 F,  pS,  R,  bM
I2149   Pl   5 56.3   +46  07  s  Aur    0.1   11.  p PN  ,  stellar
I 439          5 56.6   +32  02  d  Aur                 eeL,  eE  150deg  +/-
I2161          5 57.2   -75  08  d  Men                 eF,  vS,  bM,  susp
 2157   OC   5 57.3   -69  11  r  Dor          10.  p glob.  cl.  ,  vB,  S,  R,  vgvmbM,  rr
 2119   Gx   5 57.4   +11  57  r  Ori                 F,  vS,  R,  bM
 2153   OC   5 57.5   -66  24  r  Dor                 eeF,  lE,  *16  att
 2154   Gb   5 57.5   -67  15  r  Dor                 F,  pL,  R,  vglbM
 2156   OC   5 57.6   -68  27  r  Dor                 pB,  S,  R,  gbM,  1st  of  3
 2124   Gx   5 57.9   -20  04  r  Lep          13.  p F,  S,  E,  r
 2159   OC   5 57.9   -68  38  r  Dor                 pF,  S,  R,  gbM,  *15  att  nf
I2152   Gx   5 57.9   -23  11  c  Lep    1.9          pB,  pS,  R,  sev  B  st  f
 2160   OC   5 58.0   -68  17  r  Dor                 pF,  pS,  R,  gbM
 2173   Gb   5 58.1   -72  59  r  Men                 pF,  pL,  R,  gmbM
 2155   Gb   5 58.4   -65  28  r  Dor                 F,  pL,  R,  vglbM
 2171   Gx   5 58.6   -70  41  r  Men                 eF,  L,  R,  glbM
 2131   Gx   5 58.7   -26  38  r  Lep                 vF,  pS,  R,  gbM
 2148   Gx   5 58.7   -59  07  r  Pic                 eF,  S,  R,  *12  vnr
 2164   OC   5 58.7   -68  31  r  Dor          10.  p glob.  cl.  ,  vB,  R,  mCM,  rr
 2166   OC   5 59.3   -67  56  r  Dor                 F,  S,  R,  gbM
 2172   OC   5 59.9   -68  38  r  Dor                 F,  cL,  R,  lbM
I2153   Gx   6 00.1   -33  55  c  Col    2.5          eF,  vS,  susp
 2162   Gb   6 00.5   -63  45  r  Dor                 F,  pL,  R,  vglbM
 2190   Gb   6 00.8   -74  43  r  Men                 vF,  pL,  R,  glbM
I2155          6 00.8   -34  01  d  Col                 eF,  vS,  R,  susp
 2152   Gx   6 00.9   -50  44  c  Pic    1.3          eeF,  R,  *15  att
 2129   OC   6 01.0   +23  18  s  Gem    7.     6.7   Cl,  pL,  40  or  50  st  8...15
 2177   OC   6 01.0   -67  43  r  Dor                 F,  vS,  iR,  lbM,  r
 2139   Gx   6 01.1   -23  40  s  Lep    2.2   11.7  F,  S;  =  IC  2154
I2154   Gx   6 01.1   -23  40  c  Lep    3.3          pF,  pS,  R,  *  nf,  2  st  np;  =  2139
 2176   OC   6 01.4   -66  51  r  Dor                 eeF,  pL,  R,  gbM
 2142    -   6 01.9   -10  36  r  Mon                 *  (3  Mon)  inv  in  pL,  F,  neb
 2181   OC   6 02.6   -65  15  r  Dor                 vF,  S,  R
I 441   Gx   6 02.7   -12  30  m  Lep    1.1   14.  p eF,  vS,  diffic,  vF*  close
 2178   Gx   6 02.8   -63  46  c  Pic    1.0          eF,  vS,  R
 2126   OC   6 03.0   +49  54  s  Aur    6.    10.  p Cl,  not  Ri,  *7  n
 2143    -   6 03.0   +05  43  r  Ori                 Cl,  L,  pRi,  vlC,  st  10
 2141   OC   6 03.1   +10  26  s  Ori   10.     9.4   F,  pS,  dif
 2149   Nb   6 03.5   -09  44  s  Mon    3.           F,  *12  inv
 2187   Gx   6 03.9   -69  34  r  Dor                 pB,  pS,  R,  gbM,  Dneb  (comp  vF,  R,  glbM)
 2128   Gx   6 04.7   +57  39  r  Cam          13.  p vF,  vS,  vlE
 2199   Gx   6 04.7   -73  24  r  Men                 F,  vS,  R,  bM
 2203   OC   6 04.7   -75  26  r  Men                 F  Cl
I2156   OC   6 04.8   +24  09  x  Gem                 Cl,  nebs?
I2157   OC   6 05.0   +24  00  s  Gem    7.     8.4   Cl,  S
I2158   Gx   6 05.3   -27  51  c  Col    1.6          vF,  pS,  lE,  brush,  *  att  nf
 2197   OC   6 05.9   -67  05  r  Dor                 vF,  pS,  R,  gbM
 2193   Gb   6 06.2   -65  05  r  Dor                 F,  iF,  glbM,  2  or  3  st  inv
 2167    -   6 06.9   -06  12  r  Mon                 nebulous  *7,  am  3  st
I2164   Gx   6 06.9   -75  22  c  Men    1.3          eF,  eeS,  R,  stell  N
 2158   OC   6 07.5   +24  06  s  Gem    5.     8.6   Cl,  pS,  mC,  vRi,  irr  triangle  st  eS
 2170   Nb   6 07.5   -06  24  s  Mon    2.           *9  in  vF,  pL  neb,  E  170deg
 2163          6 07.8   +18  40  D  Ori                 eF,  E,  dif,  *11  att  s
 2179   Gx   6 08.0   -21  45  s  Lep    1.5   12.5  F,  pS,  bet  2  st,  glbM
 2169   OC   6 08.4   +13  57  s  Ori    7.     5.9   Cl,  S,  lRi,  pmC,  **  (ADS  4728)
 2191   Gx   6 08.4   -52  31  c  Car    1.9          pB,  vS,  E,  vsbM,  *9  p  5s
 2209   Gb   6 08.7   -73  51  r  Men                 vF,  cL,  R,  gvlbM
 2168   OC   6 08.9   +24  20  s  Gem   28.     5.1   Cl,  vL,  cRi,  pC,  st  9...16;  =  M35
 2182   Nb   6 09.5   -06  20  s  Mon    3.           pB**  ,  L*  neb,  E  90deg  +/-
 2180    -   6 09.6   +04  43  r  Ori                 Cl,  pRi,  lC,  st  L  and  S
 2174   Nb   6 09.7   +20  30  s  Ori   40.           eF,  bet  3  vF  st
 2175   OC   6 09.8   +20  19  s  Ori   18.     6.8   *8  in  neb
I2159   Nb   6 09.9   +20  24  x  Ori                 vF,  vL,  dif
 2188   Gx   6 10.1   -34  06  s  Col    3.7   11.8  pF,  pL,  vmE,  gvlbM
 2205   Gx   6 10.6   -62  32  c  Pic    1.4          pF,  S,  R,  bM
 2213   Gb   6 10.7   -71  33  r  Men                 vF,  S,  R,  glbM,  ***  p
 2183   Nb   6 10.8   -06  13  s  Mon    1.           eF,  S,  lE,  *11-12  sp
 2184   OC   6 10.9   -03  31  F  Ori                 Cl,  L,  vlC
 2165    -   6 11.1   +51  41  r  Aur                 Cl,  pL,  poor,  st  11
 2185   Nb   6 11.1   -06  13  s  Mon    3.           *11  and  4  S  st  in  vF,  L  neb
 2210   Gb   6 11.5   -69  08  s  Dor    1.7   10.2  vB,  pL,  R,  mbM,  r
 2186   OC   6 12.2   +05  27  s  Ori    4.     8.7   Cl,  pL,  pRi,  pC,  st  L  and  S
 2196   Gx   6 12.2   -21  48  s  Lep    2.8   11.2  pF,  pS,  vlE,  pmbM,  st  nr
 2189    -   6 12.3   +01  08  r  Ori                 2  clusters  nr  2  st  9-10  &  10-11
 2214   OC   6 12.8   -68  16  r  Dor          11.  p B,  pS,  lE,  gbM,  rrr
I2162   Nb   6 12.9   +17  59  s  Ori   15.           vF,  pL,  R,  *10  inv  p
 2200   Gx   6 13.4   -43  39  r  Pup                 eF,  pS,  R,  vlbM
 2201   Gx   6 13.4   -43  41  r  Pup                 eeF,  S,  R,  psbM
 2194   OC   6 13.8   +12  48  s  Ori   10.     8.5   Cl,  L,  Ri,  gvmCM
 2198    -   6 13.9   +01  00  r  Ori                 Cl,  bet  2  st  9-10  &  10-11
 2195   Nb   6 14.4   +17  39  s  Ori                 F,  S,  2  S  st  inv,  *10  n  31"
 2192   OC   6 15.2   +39  51  s  Aur    6.    11.  p Cl,  cL,  C,  iF,  st  vS
 2204   OC   6 15.7   -18  39  s  CMa   13.     8.6   Cl,  L,  pRi,  lC
 2206   Gx   6 16.0   -26  46  s  CMa    2.3   13.  p F,  pS,  vlE,  psbM
 2207   Gx   6 16.4   -21  22  s  CMa    4.3   10.7  pB,  pL,  mE  87deg  ,  pslbMRN,  biN,  ring  surr
I2163   Gx   6 16.5   -21  23  c  CMa                 eF,  pS,  2207  p  7s
 2202    -   6 16.9   +05  59  r  Ori                 **  chief  of  Cl
I 443   Nb   6 16.9   +22  47  s  Gem   50.           F,  narrow,  curved
 2211   Gx   6 18.4   -18  34  r  CMa          14.  p vF,  pS,  E  45deg  ,  bMN
 2212   Gx   6 18.5   -18  33  r  CMa          14.  p eF,  vS,  R,  in  field  with  2211
 2146   Gx   6 18.7   +78  21  s  Cam    6.0   10.5  pB,  2'  l,  lE
I 440   Gx   6 18.9   +80  04  u  Cam    2.1   14.  p vF,  S
 2221   Gx   6 20.2   -57  35  c  Pic    1.5          vF,  lE,  vgbM,  p  of  2
 2222   Gx   6 20.3   -57  32  c  Pic    1.1          vF,  lE,  vgvlbM,  f  of  2
 2231   Gb   6 20.4   -67  32  r  Dor                 F,  pL,  R,  gvlbM,  **  f
I 444   Nb   6 20.4   +23  16  s  Gem    8.           neb,  *9.5  inv
 2215   OC   6 21.0   -07  17  s  Mon   11.     8.4   Cl,  cL,  pRi,  pC,  st  11...15
 2228   Gx   6 21.2   -64  27  r  Dor                 F,  S,  R,  glbM
 2229   Gx   6 21.3   -64  58  r  Dor                 eF,  vS,  R,  1st  of  3
 2230   Gx   6 21.4   -65  00  r  Dor                 eF,  S,  lE,  2nd  of  3
 2216   Gx   6 21.6   -22  05  r  CMa          14.  p vF,  pL,  R,  vglbM
 2217   Gx   6 21.7   -27  14  s  CMa    4.8   10.4  vB,  S,  R,  psmbM,  r
 2233   Gx   6 21.7   -65  03  r  Dor                 eF,  S,  3rd  of  3
I2165   Pl   6 21.7   -12  59  s  CMa    0.1   13.  p PN  ,  stellar
 2220   Ast  6 21.8   -44  46  A  Pup                 Cl,  B,  P,  st  8...
 2235   Gx   6 22.3   -64  57  r  Dor                 vF,  S,  R,  *12  nr
 2208   Gx   6 22.5   +51  55  r  Aur          14.  p pF,  pS,  lE
 2241   OC   6 22.7   -68  57  r  Dor                 vF,  pL,  R,  glbM
 2219    -   6 23.4   -04  41  r  Mon                 Cl,  P,  vlC,  st  6,  11...12
 2223   Gx   6 24.6   -22  50  s  CMa    3.3   11.4  F,  pL,  R,  vglbM,  2  st  inv
 2218    -   6 24.7   +19  20  r  Gem                 F  Cl
 2227   Gx   6 25.9   -21  59  s  CMa    2.3   14.  p eF,  R,  **  p  270deg  ,  90"
 2249   Gb   6 25.9   -68  48  r  Dor                 pB,  pL,  R,  vgbM,  **  p
 2225   OC   6 26.6   -09  39  F  Mon                 Cl,  P,  lCM,  st  12...15
 2232   OC   6 26.6   -04  45  s  Mon   30.     3.9   B*  (10  Mon)  +  Cl
 2226    -   6 26.7   -09  39  r  Mon                 S,  v  diffic,  *10  close  s
I2166   Gx   6 27.0   +59  05  s  Lyn    2.9   13.  p neb;  F*  p  1',  D*  f  3'
 2224    -   6 27.6   +12  38  r  Gem                 Cl,  pC,  with  neb?
 2234    -   6 29.3   +16  41  r  Gem                 Cl,  eL,  pRi,  lC,  st  L  &  S
 2236   OC   6 29.7   +06  50  s  Mon    7.     8.5   Cl,  pRi,  pC,  st  10,  12...15
 2243   OC   6 29.8   -31  17  s  CMa    5.     9.4   F  Cl,  st  9...11
 2237   Nb   6 30.3   +05  03  d  Mon                 pB,  vvL,  dif,  part  of  eL  nebs  ring  ar  2239
 2257   Gb   6 30.4   -64  19  s  Dor    3.4   13.5  F,  cL,  R,  vglbM,  r,  17s  d
 2238   C+N  6 30.6   +05  01  D  Mon                 S*  in  neby,  part  of  eL  nebs  ring  ar  2239
 2239   OC   6 31.0   +04  57  s  Mon   16.           *8  in  L,  P,  B  Cl
I 446   Nb   6 31.0   +10  27  s  Mon    5.           neb  *10;  =  IC  2167
I 447          6 31.2   +10  02  x  Mon                 vF,  eeL,  dif;  =  IC  2167
I2169   Nb   6 31.2   +09  54  s  Mon   25.           F,  L,  dif,  sev  st  9-10  inv
I2167          6 31.3   +10  27  d  Mon                 *9.5  in  F,  L  neb
 2244   OC   6 32.4   +04  52  s  Mon   24.     4.8   Cl,  beautiful,  st  sc  (12  Mon)
 2246   Nb   6 32.4   +05  07  r  Mon                 eeF,  L,  irr  R,  e  diffic
 2245   Nb   6 32.7   +10  10  s  Mon    5.           pL,  com,  mbN  sf  alm  *,  *7-8  nf
I 448   Nb   6 32.7   +07  19  s  Mon   15.           neby,  np  *5
 2250   OC   6 32.8   -05  02  s  Mon    8.     9.  p Cl,  pRi,  lC,  iF,  st  8,  12...14
 2240    -   6 32.9   +35  12  r  Aur                 Cl,  pL,  P,  vlC,  st  7,  10...15
 2247   Nb   6 33.2   +10  20  s  Mon    4.           neb*  in  eF,  eL  neby,  nf  2245
I2168   OC   6 33.8   +44  41  x  Aur                 Cl,  S,  F  neby
 2242   Pl   6 34.0   +44  46  A  Aur          14.  p eeF,  vS,  R,  F*  nf
 2255   Gx   6 34.0   -34  47  r  Col                 eF,  S,  lE,  vlbM
I2170          6 34.1   +44  42  d  Aur                 eF,  S,  r,  *13  spp  0'.8
 2248    -   6 34.6   +26  19  r  Gem                 small  cluster
 2251   OC   6 34.7   +08  22  s  Mon   10.     7.3   Cl,  vL,  E,  Ri,  lC
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 2252   OC   6 35.0   +05  23  s   Mon   20.      8.  p Cl,  vL,  pRi,  lC,  st  S
 2254   OC   6 36.0   +07  40  s   Mon    4.      9.7   Cl,  S,  pC,  iF,  st  11...13
I 442   Gx   6 36.5   +82  58  u   Cam    1.4    14.  p F,  S,  R,  mbM
I 445   Gx   6 37.3   +67  51  u   Cam    1.2    14.  p eF,  S,  R,  B* sf
 2260    -   6 38.1   -01  28  r   Mon                  Cl,  vL,  P,  vlC,  st  L  &  S
 2262   OC   6 38.4   +01  11  s   Mon    4.      11.  p Cl,  vC,  iR,  bM,  st  eS
 2263   Gx   6 38.4   -24  49  r   CMa                  13.  p pF,  lE,  bet  2  vS  st,  pslbM
 2259   OC   6 38.6   +10  53  s   Mon    5.      11.  p Cl,  cRi,  eC,  iF,  st  eS
 2261   Nb   6 39.2   +08  44  s   Mon    2.           B,  vmE  330deg  ,  N  com  =  *11
 2267   Gx   6 40.8   -32  29  r   CMa                  14.  p two  neb  close  together
 2264  C+N   6 41.1   +09  53  s   Mon   60.      3.9   eL  neb,  3deg  diam,  densest  12'  sp  15  Mon
 2265    -   6 41.5   +11  56  r   Gem                  Cl,  P,  30  or  40  st  12...13
 2253   OC   6 42.4   +66  20  A   Cam                  vF,  st  eS
 2272   Gx   6 42.7   -27  27  s   CMa    2.1    11.9   pF,  pS,  vlE,  bM,  r
 2271   Gx   6 42.8   -23  28  r   CMa                  14.  p pF,  S,  R,  gbM,  am  st
 2266   OC   6 43.2   +26  58  s   Gem    7.      10.  p Cl,  pS,  eC,  Ri,  st  11...15
 2269   OC   6 43.9   +04  34  s   Mon    4.      10.0   Cl,  vmC,  not  Ri,  st  vS
 2270    -   6 43.9   +03  26  r   Mon                  Cl,  lC,  not  Ri
 2297   Gx   6 44.4   -63  43  c   Pic    1.6            vF,  S,  R,  vglbM
I2171   Gx   6 44.4   -17  56  c   CMa    1.8            F,  3  st  10  around
 2280   Gx   6 44.8   -27  38  s   CMa    5.6    12.  p pF,  pL,  lE,  gbM
I 449   Gx   6 45.7   +71  21  v   Cam    2.0            pF,  S,  R,  bM,  bet  2  D  st
 2283   Gx   6 45.9   -18  14  r   CMa                  13.  p 3  or  4  S  st  +  neb
 2282   Nb   6 46.9   +01  19  s   Mon    3.             *10  in  F,  R  neby
I2172       6 46.9   +01  20  d   Mon                  neb*
 2287   OC   6 47.0   -20  44  s   CMa   38.      4.5   Cl,  vL,  B,  lC,  st  8...;  =  M41
 2256   Gx   6 47.2   +74  14  s   Cam    2.6    14.  p F,  R,  *9.5  3'  sf
 2274   Gx   6 47.2   +33  34  r   Gem                  13.  p F,  S,  bM
 2275   Gx   6 47.2   +33  36  r   Gem                  14.  p eF,  vS
 2295   Gx   6 47.3   -26  44  r   CMa                  14.  p eF,  S,  R,  bet  st,  Dneb  f
 2286   OC   6 47.6   -03  10  s   Mon   15.      7.5   Cl,  L,  C,  ab  100  st  9...15
 2292   Gx   6 47.6   -26  45  r   CMa                  14.  p eF,  R,  gbM,  D  with  2293,  am  st
 2293   Gx   6 47.7   -26  45  r   CMa                  13.  p pB,  R,  gbM,  D  with  2292,  am  st
 2258   Gx   6 47.8   +74  29  s   Cam    2.6    13.  p F,  2  st  10-11  f
 2277    -   6 47.8   +33  26  r   Gem                  Cl,  vS,  lRi
 2278    -   6 48.3   +33  24  r   Gem                  vF,  vS;  =  2274?
 2279    -   6 48.4   +33  24  r   Gem                  vF,  vS,  stellar  Nucl;  =  2275?
 2296   Gx   6 48.6   -16  55  r   CMa                  13.  p vF,  vS,  R;  =  IC  452
 2305   Gx   6 48.6   -64  16  c   Vol    2.0            vF,  vS,  R,  2  st  triangle
I 452   Gx   6 48.6   -16  54  c   CMa                  *13.5  in  S  neby;  =  2296
 2307   Gx   6 48.8   -64  20  c   Vol    1.6            vF,  pS,  vlE  90deg
 2298   Gb   6 49.0   -36  00  s   Pup    6.8     9.4   glob.  cl.  ,  B,  pL,  iR,  gbM,  rr
 2284    -   6 49.1   +33  13  r   Gem                  F,  r
I 453    *   6 49.1   -17  02  F   CMa                  2  or  3  st  close?
 2281   OC   6 49.3   +41  04  s   Aur   15.      5.4   Cl,  pRi,  vlC,  st  pL
 2285    -   6 49.4   +33  21  r   Gem                  eF,  eS,  r?
 2273   Gx   6 50.1   +60  51  s   Lyn    3.5    12.  p F,  S,  iR,  r?
 2288   Gx   6 50.7   +33  26  A   Gem                  14.  p eF,  vS
 2289   Gx   6 50.7   +33  27  A   Gem                  15.  p cF,  S,  R
I2173       6 50.8   +33  26  x   Gem                  eF,  neb*,  2288  close,  *12  nnp  1';  =  2291
 2290   Gx   6 51.0   +33  26  s   Gem    1.5    15.  p F,  S,  gbM
 2291   Gx   6 51.0   +33  32  s   Gem    1.3    16.  p eF,  vS;  =  IC  2173
 2299    -   6 51.1   -07  00  r   Mon                  Cl  of  30  or  40  st
I 454       6 51.1   +12  54  D   Gem                  eeF,  S,  e  diffic,  one  or  2  st  inv
 2294   Gx   6 51.2   +33  32  s   Gem    1.1    15.  p eeF
 2301   OC   6 51.8   +00  28  s   Mon   12.      6.0   Cl,  Ri,  L,  iF,  st  L  &  S
 2302   OC   6 51.9   -07  04  s   Mon    3.      8.9   Cl,  L,  P,  lC
I 450   Gx   6 52.2   +74  26  v   Cam    1.3            vF,  S
I 451   Gx   6 52.9   +74  29  v   Cam    1.6            vF,  S
 2310   Gx   6 54.0   -40  52  s   Pup    5.0    12.  p pB,  pL,  vmE  45deg  ,  pslbM
 2306    -   6 54.6   -07  11  r   Mon                  Cl,  P,  vlC
 2304   OC   6 55.0   +18  01  s   Gem    5.      10.  p Cl,  pL,  Ri,  mC,  st  vS
 2303   Gx   6 56.2   +45  30  r   Aur                  14.  p eF,  vS,  R,  sev  st  nr
 2309   OC   6 56.2   -07  12  s   Mon    3.      11.  p Cl,  pL,  pRi,  mC,  st  13
 2311   OC   6 57.8   -04  35  s   Mon    7.      10.  p Cl,  lC,  not  Ri
 2313   Nb   6 58.0   -07  57  F   Mon                  F,  vS,  R
 2308   Gx   6 58.6   +45  13  r   Lyn                  14.  p eF,  vS,  vF*  inv
 2312    -   6 58.8   +10  16  r   Mon                  Cl,  P
 2317    -   6 58.8   -07  46  r   Mon                  close  Dneb  with  2316
 2318   OC   6 59.5   -13  42  F   CMa                  Cl,  L,  sc  st  8...9
 2316   Nb   6 59.7   -07  46  s   Mon    4.            pF,  S,  R,  r,  S  st  inv
I2175       6 59.7   +35  17  d   Gem                  eF,  pL,  r,  nebs?
I 456   Gx   7 00.3   -30  10  c   CMa    2.3            vF,  pS,  R,  B  st  nf  and  np
 2319    -   7 01.1   +03  04  r   Mon                  Cl  of  v  sc  st  8,  9...
 2315   Gx   7 02.5   +50  36  r   Lyn                  14.  p eF
 2328   Gx   7 02.5   -42  03  r   Pup                  vF,  S,  vlE,  bM,  am  st
 2325   Gx   7 02.7   -28  42  s   CMa    2.3    11.2   pB,  pL,  lE,  gbM
 2348       7 03.1   -67  23  r   Vol                  Cl,  P,  lC,  30  st  +/-
 2323   OC   7 03.2   -08  20  s   Mon   16.      5.9   !  Cl,  vL,  Ri,  pC,  E,  st  12...16;  =  M50
 2324   OC   7 04.2   +01  03  s   Mon    8.      8.4   Cl,  L,  Ri,  cC,  st  12...16
 2327   Nb   7 04.3   -11  18  r   CMa                  pB**  inv  in  S,  vF,  neb
I2177   Nb   7 05.1   -10  42  s   Mon  120.           pB,  eL,  iR,  v  dif
 2320   Gx   7 05.6   +50  36  r   Lyn                  14.  p pB,  S,  iR,  gbM,  *8  at  120deg
 2321   Gx   7 05.9   +50  46  r   Lyn                  15.  p vF,  12'n  of  2320
 2322   Gx   7 05.9   +50  31  r   Lyn                  14.  p vF,  vS,  lE
 2335   OC   7 06.6   -10  05  s   Mon   12.      7.2   Cl,  L,  lC
 2331   OC   7 07.2   +27  21  s   Gem   18.      9.  p Cl,  L,  vlC,  S  Cl  inv
I2176   Gx   7 07.5   +32  28  m   Gem    0.4    15.  p vF,  vS,  R,  stell
I2178   Gx   7 07.6   +32  31  z   Gem                  16.  p vF,  vS,  R,  bMN
 2338   Ast  7 07.7   -05  37  F   Mon                  Cl,  vlC
 2339   Gx   7 08.3   +18  47  s   Gem    2.8    11.6   pB,  pL,  R,  glbM
 2343   OC   7 08.3   -10  39  s   Mon    7.      6.7   Cl,  cL,  P,  lC
 2345   OC   7 08.3   -13  10  s   CMa   12.      7.7   Cl,  pL,  pRi,  gbM,  st  10...14
 2326   Gx   7 08.4   +50  44  r   Lyn                  14.  p vF,  pL,  iR,  psmbM,  st  p
 2333   Gx   7 08.4   +35  11  r   Gem                  14.  p vF,  S,  R,  bM
I 466   Nb   7 08.6   -04  19  s   Mon    1.             *11.5  in  vF  neb
I2174   Gx   7 09.1   +75  21  v   Cam    1.2            eF,  S,  bM
 2329   Gx   7 09.2   +48  37  s   Lyn    1.6    14.  p vF,  vS,  stellar
 2341   Gx   7 09.3   +20  35  s   Gem    1.1    14.  p vF,  vS
 2342   Gx   7 09.4   +20  38  s   Gem    1.6    13.  p pF,  S,  lE,  vlbM
 2346   Pl   7 09.4   -00  48  s   Mon    0.9            *10  att  with  S,  vF,  neb
I 457   Gx   7 09.4   +50  09  m   Lyn    0.3    16.  p eF,  sp  2332
 2330   Gx   7 09.5   +50  12  r   Lyn                  14.  p vF,  vS,  v  stellar
 2332   Gx   7 09.5   +50  11  r   Lyn                  14.  p F,  S,  R,  psbM
 2334    -   7 09.9   +50  12  r   Lyn                  vF,  bet  2  st  12
 2349    -   7 10.0   -08  37  r   Mon                  Cl,  cL,  P,  cC
 2337   Gx   7 10.2   +44  27  s   Lyn    2.6    13.  p eF,  S,  E
 2314   Gx   7 10.5   +75  20  s   Cam    2.1    11.9   vF,  S,  R
I 458   Gx   7 10.5   +50  06  u   Lyn    1.0    14.  p F,  bM
I 459       7 10.6   +50  11  d   Lyn                  eF
I 460   Gx   7 10.7   +50  13  m   Lyn    0.4    16.  p vF  (not  seen  at  Birr)
I 461   Gx   7 10.7   +50  05  m   Lyn    0.6    16.  p vF,  3  F  st  f
I 463   Gx   7 10.9   +50  08  z   Lyn                  15.  p eF
 2340   Gx   7 11.0   +50  10  r   Lyn                  14.  p pF,  S,  R,  glbM,  r
I 462       7 11.0   +50  11  d   Lyn                  vF  (not  seen  at  Birr)
I 464   Gx   7 11.0   +50  09  m   Lyn    0.6    15.  p F
I2180   Gx   7 11.3   +26  23  u   Gem    1.2    15.  p F,  S,  iF,  dif
I 465   Gx   7 11.5   +50  15  m   Lyn    0.8    15.  p F
 2344   Gx   7 12.5   +47  10  s   Lyn    2.0    12.1   pB,  pS,  R,  lbM
 2350   Gx   7 13.2   +12  15  r   CMi                  14.  p eF,  eS,  iR
I2181   Gx   7 13.2   +19  00  u   Gem    1.0    15.  p F,  S,  R,  stell
 2351       7 13.5   -10  29  F   Mon                  Cl,  lC,  **  taken
 2352    -   7 13.6   -24  06  r   CMa                  Cl,  pRi,  pC
 2268   Gx   7 14.    +04  23  s   Cam    3.4    11.5   pF,  pL,  lE
I2182       7 14.2   +18  57  d   Gem                  vF,  vS,  dif,  *12  att
 2354   OC   7 14.3   -25  44  s   CMa   20.      6.5   Cl,  cRi,  lC
 2353   OC   7 14.6   -10  18  s   Mon   20.      7.1   Cl,  L,  lC,  one  vB*
I2179   Gx   7 15.5   +64  56  s   Cam    1.0    12.6   *13  in  vF,  vS  neb  (=  2347?)
 2347   Gx   7 16.1   +64  43  s   Cam    2.0    12.5   vF,  S,  R,  lbM
 2369   Gx   7 16.6   -62  21  s   Car    4.6    13.  p pB,  pL,  iE,  glbM
 2358    -   7 16.8   -17  03  r   CMa                  Cl,  P,  lC
 2355   OC   7 16.9   +13  47  s   Gem    9.      10.  p Cl,  pS,  pRi,  mC,  st  15...16
I2183       7 16.9   -20  25  d   CMa                  wisp  2'  ns,  3  st  n,  susp
 2356    -   7 17.1   +13  58  r   Gem                  Cl,  lC
I 468   Nb   7 17.5   -13  09  s   CMa   20.           vF  neby,   perhaps  2  or  3  st  inv
 2357   Gx   7 17.6   +23  22  s   Gem    4.5    14.  p eF,  L,  mE,  bM,  F  st  inv
 2360   OC   7 17.8   -15  37  s   CMa   13.      7.2   Cl,  vL,  Ri,  pC,  st  9...12
 2361  D*?   7 18.4   -13  13  F   CMa                  vvF,  vS;  part  of  2359
 2359   Nb   7 18.6   -13  12  s   CMa    8.           !!,  vF,  vvL,  viF
 2362  C+N   7 18.8   -24  57  s   CMa    8.      4.1   Cl,  pL,  Ri  (30  CMa)
 2381   Gx   7 20.0   -63  04  c   Car    1.6            vF,  vS,  R,  am  st
 2367   OC   7 20.1   -21  56  s   CMa    4.      7.9   Cl,  S,  P,  lC
 2364   OC   7 20.8   -07  34  F   Mon                  Cl,  pC,  st  pL,  bifid
 2368   OC   7 21.0   -10  23  s   Mon    5.      12.  p Cl,  S,  pRi,  st  15
 2397   Gx   7 21.3   -69  00  s   Vol    2.2     13.  p pB,  cL,  cE  117deg  ,  lbM
 2365   Gx   7 22.5   +22  04  r   Gem                  14.  p vF,  pS,  R,  psbM
I2186       7 22.7   +21  32  d   Gem                  F,  S,  R,  gbM,  r
I2187       7 22.7   +21  29  d   Gem                  F,  S,  R,  dif,  *11.5  vnr
I2188       7 22.7   +21  30  d   Gem                  F,  S,  dif,  FN
I2185   Gx   7 23.2   +32  30  m   Gem    0.5    15.  p F,  S,  R
I 470       7 23.5   +46  05  d   Lyn                  eF,  eS,  stellar
 2380   Gx   7 23.9   -27  31  r   CMa                  13.  p pF,  pS,  R,  vsmbM,  am  st
 2382       7 23.9   -27  32  D   CMa                  pF,  S,  R,  bM;  =  2380
 2374   OC   7 24.0   -13  16  s   CMa   19.      8.0   Cl,  vL,  pRi,  lC,  st  L
 2383   OC   7 24.8   -20  56  s   CMa    6.      8.4   Cl,  pS,  pmC,  st  12
 2377   Gx   7 24.9   -09  40  s   Mon    1.8    15.  p eF,  vS*  inv,  *11  s
 2370   Gx   7 25.0   +23  47  r   Gem                  14.  p eF,  vS,  E
I2189       7 25.0   +08  55  d   CMi                  PN   stell
 2384   OC   7 25.1   -21  02  s   CMa    3.      7.4   Cl,  lC,  bifid,  **
 2371   Pl   7 25.6   +29  29  s   Gem    0.9     13.  p B,  S,  R,  bMN,  p  of  Dneb
 2372   Pl   7 25.6   +29  30  d   Gem                  pB,  S,  R,  bMN,  f  of  Dneb
 2373   Gx   7 26.5   +33  48  r   Gem                  14.  p eF,  vS
 2376   Gx   7 26.6   +23  04  r   Gem                  14.  p eF,  vS
 2276   Gx   7 27.    +85  45  s   Cep    2.6    11.4   F,  60",  lbM
 2336   Gx   7 27.1   +80  11  s   Cam    6.9    10.5   pB,  pL,  R,  2  st  11  nr
 2375   Gx   7 27.1   +33  49  r   Gem                  14.  p eF,  vS,  2379  f  17s  ,  1'  s
 2395   OC   7 27.1   +13  35  s   Gem   12.      8.0   Cl,  pRi,  C
 2378    -   7 27.4   +33  50  r   Gem                  2  vF  close  st  in  eF  neb,  2379  f  2s  ,  1'  s
 2379   Gx   7 27.4   +33  49  s   Gem    1.1    13.5   vF,  vS
I2202   Gx   7 27.9   -67  34  c   Vol    2.1            eF,  eS,  R
 2396   OC   7 28.1   -11  44  s   Pup   10.      7.  p Cl,  vL,  vlC
I2200   Gx   7 28.3   -62  22  c   Car    1.1            eF,  eS,  eE  65deg  ,  bet  2  st,  susp
 2385   Gx   7 28.4   +33  50  r   Gem                  15.  p vF,  vS,  R,  bM
I2195       7 28.4   -51  15  d   Car                  cB,  S,  R,  bM,  susp
 2386  ***   7 28.6   +33  46  r   Gem                  stellar
 2394    -   7 28.6   +07  02  r   CMi                  Cl,  L,  P,  vlC,  st  L
 2363   Gx   7 28.7   +69  04  A   Cam                  neb*  or  vFvS,  2366  sf
 2388   Gx   7 28.8   +33  49  r   Gem                  14.  p vF,  S,  R,  bM
 2366   Gx   7 28.9   +69  13  s   Cam    7.6    10.9   vF,  pL,  mbM,  vS*  inv,  curved  tails
 2387   Gx   7 29.0   +36  52  r   Aur                  15.  p pB,  S,  stellar
 2390    *   7 29.0   +33  50  r   Gem                  vF
 2389   Gx   7 29.1   +33  51  s   Gem    2.1    12.8   vF,  S,  R,  psbM
 2391    -   7 29.2   +33  49  r   Gem                  eF
 2392   Pl   7 29.2   +20  55  s   Gem    0.7    10.  p B,  S,  R,  *9  M,  *8  nf  100"
 2401   OC   7 29.4   -13  58  s   Pup    2.      13.  p Cl,  S,  cRi,  cC,  st  vS
I2184   Gx   7 29.4   +72  08  v   Cam    1.3            vF,  S,  stell,  r
 2399  ***   7 29.9   -00  13  F   CMi                  1st  of  2  F  neb  (vS  clusters?)
I2190       7 29.9   +37  31  d   Aur                  F,  pS,  dif
 2393   Gx   7 30.0   +34  01  r   Gem                  15.  p eF,  pS,  lE,  dif,  r?
 2400  ***   7 30.0   -00  13  F   CMi                  2nd  of  2  F  neb  (vS  clusters?)
I 467   Gx   7 30.0   +79  52  s   Cam    3.5    12.  p vF,  pS,  ssF  of  2336
 2417   Gx   7 30.1   -62  15  v   Car    2.2            vF,  L,  R,  gbM,  r
 2398   Gx   7 30.3   +24  29  r   Gem                  15.  p vF,  eS,  bM,  Dneb?
I2191   Gx   7 30.3   +24  18  m   Gem    0.7    15.  p F,  vS,  R,  stell
 2402   Gx   7 30.8   +09  39  r   CMi                  15.  p eF,  S,  R,  lbM,  *  inv
 2409    -   7 31.6   -17  11  r   Pup                  Cl,  S  but  B,  st  8...10
 2406   Gx   7 31.9   +18  18  r   Gem                  15.  p eF,  eS,  vSN?
 2407   Gx   7 31.9   +18  21  r   Gem                  15.  p eF,  eS,  vSN?
 2300   Gx   7 32.    +85  43  s   Cep    3.1    11.0   pB,  pL,  lE,  bM
 2405   Gx   7 32.2   +25  55  r   Gem                  14.  p vF,  S,  iR
 2413    -   7 33.3   -13  06  r   Pup                  Cl,  vL,  P,  vlC
 2414   OC   7 33.3   -15  27  s   Pup    4.      7.9   Cl,  P,  lC,  st  9...
I2192       7 33.3   +31  22  d   Gem                  F,  vS,  R,  *14  nearly  in  cont
I2193       7 33.3   +31  27  d   Gem                  close  p  *10  (=  IC  2192?)
I2194   Gx   7 33.7   +31  19  m   Gem    1.0    15.  p F,  S,  R,  gbM,  r
I2196   Gx   7 34.1   +31  24  u   Gem    1.5    14.  p F,  S,  pR,  gbM,  r,  3  st  2'  p
I2198   Gx   7 34.1   +23  58  z   Gem                  15.  p F,  S,  R,  gbM,  r
I2197   Gx   7 34.3   +31  24  m   Gem    0.5    14.  p vvF
 2412    -   7 34.4   +08  33  r   CMi                  vF,  *8  f  59s  ,  1'.5  s,  *13  s  10"
 2411   Gx   7 34.6   +18  17  r   Gem                  14.  p *14  slightly  nebs
 2434   Gx   7 34.9   -69  17  s   Vol    2.5    11.2   pB,  S,  R,  pmbM,  3  st  11  n
I2199       7 34.9   +31  13  d   Gem                  F,  S
I 455   Gx   7 35.    +85  33  u   Cep    1.2    14.  p vF,  eS,  sf  2300
 2410   Gx   7 35.0   +32  50  r   Gem                  14.  p eF,  vS,  sev  vF  st  inv,  1'  long,  gbM,  r
 2416   Gx   7 35.7   +11  37  r   CMi                  14.  p eF,  S
I2201   Gx   7 36.2   +33  07  u   Gem    1.3    15.  p F,  vS,  R,  gbM,  r
 2421   OC   7 36.3   -20  37  s   Pup   10.      8.3   Cl,  L,  cRi,  st  11...13
 2443    -   7 36.3   -69  32  r   Vol                  pL,  vF,  R,  D  with  42,  D*  inv  M
 2442   Gx   7 36.4   -69  32  s   Vol    6.0    11.  p Cl,  vF,  R,  D  with  43,  D*  inv  M
 2418   Gx   7 36.5   +17  54  r   Gem                  13.  p vF,  eS,  bM
 2427   Gx   7 36.5   -47  38  s   Pup    5.6    11.6   eF,  L,  pmE,  gmbM,  2  st  inv
 2422   OC   7 36.6   -14  30  s   Pup   30.      4.4   Cl,  B,  vL,  pRi,  st  L  and  S;  =  M47
 2403   Gx   7 36.9   +65  36  s   Cam   17.8     8.4   !!  cB,  eL,  vmE,  vgmbMN
 2415   Gx   7 36.9   +35  15  s   Lyn    1.0    12.4   pB,  cS,  R,  vgvlbM,  r,  alm  PN
 2404   Kt   7 37.1   +65  42  A   Cam                  vF,  vS
 2423   OC   7 37.1   -13  52  s   Pup   19.      6.7   Cl,  vL,  Ri,  pC,  st  vS
 2419   Gb   7 38.1   +38  53  s   Lyn    4.1    10.4   pB,  pL,  lE  90deg  ,  vgbM,  *7-8  267deg  ,  4'
      dist
 2425   OC   7 38.3   -14  52  s   Pup    3.             Cl,  P,  S,  st  vS
 2420   OC   7 38.5   +21  34  s   Gem   10.      8.3   Cl,  cL,  Ri,  C,  st  11...18
 2428    -   7 39.2   -16  31  r   Pup                  Cl,  vL,  vlC
 2430    -   7 39.4   -16  21  r   Pup                  Cl,  vL,  vlC
 2408  Ast   7 40.5   +71  39  A   Cam                  Cl,  vlC
I2203   Gx   7 40.6   +34  13  u   Gem    1.2    14.  p F,  S,  R,  gbM,  r
 2424   Gx   7 40.7   +39  14  s   Lyn    4.0    12.6   vF,  pS,  mE,  lbM,  r?
 2439   OC   7 40.8   -31  39  s   Pup   10.      6.9   Cl,  B,  pRi,  pL,  lC,   st  9,  12...14
 2432   OC   7 40.9   -19  05  s   Pup    8.      10.  p Cl,  pL,  pC,  E  0deg  ,  st  L  and  S
I2204   Gx   7 41.2   +34  13  u   Gem    1.1    15.  p F,  vS,  R,  eFN,  r
 2437   OC   7 41.8   -14  49  s   Pup   27.      6.1   !,  Cl,  vB,  vRi,  vL,  inv  PN  ;  =  M46
 2438   Pl   7 41.8   -14  44  s   Pup    1.1    10.  p PN  ,  pB,  pS,  vlE,  r,  3s  .75  d
 2440   Pl   7 41.9   -18  13  s   Pup    0.5    11.  p PN  ,  cB,  not  v  well  def
I 473       7 42.4   +09  15  d   CMi                  neb  *14,  2433  nf
 2433   Gx   7 43.0   +09  19  r   CMi                  eF,  *15,  90"  sp
 2426   Gx   7 43.2   +52  49  r   Lyn                  14.  p cF,  R,  vgbM,  r,  *8  p
I 471   Gx   7 43.6   +49  39  u   Lyn    0.8    14.  p eF,  pS,  R,  np  of  2
 2429   Gx   7 43.7   +52  21  r   Lyn                  14.  p pF,  pS,  vmE,  *12  att
I 472   Gx   7 43.8   +49  36  u   Lyn    1.9    14.  p eeF,  pS,  R,  sf  of  2
 2435   Gx   7 44.2   +31  38  r   Gem                  13.  p F,  S,  lbM
 2447   OC   7 44.6   -23  52  s   Pup   22.      6.2   Cl,  L,  pRi,  lC,  st  8...13;  =  M93
 2448    -   7 44.6   -24  41  r   Pup                  Cl  of  18  or  20  st  11...13
 2466   Gx   7 45.2   -71  24  v   Vol    1.5            vF,  S,  R,  lbM
 2431   Gx   7 45.3   +53  04  r   Lyn                  14.  p eF,  vS,  R,  bM
 2451   OC   7 45.4   -37  58  s   Pup   45.      2.8   Cl,  vvL,  vlC,  one  *4.5
I2206       7 45.8   -34  22  d   Pup                  PN  ,  stell,  9.5m
 2436    *   7 46.1   +52  04  r   Lyn                  vF,  vS,  R,  bM
I 474       7 46.1   +26  29  d   Gem                  pB,  vS,  dif
 2444   Gx   7 46.9   +39  02  s   Lyn    2.3    12.9   vF,  mbM
 2445   Gx   7 46.9   +39  01  s   Lyn    2.1    13.0   vF,  mbM,  S*  att  s
I2205   Gx   7 46.9   +26  53  z   Gem                  15.  p F,  vS,  neb  D*
I 475   Gx   7 47.2   +30  31  m   Gem    0.5    15.  p vF,  vS,  dif
 2449   Gx   7 47.3   +26  55  r   Gem                  14.  p eF,  eS,  R,  bM,  r
I 476   Gx   7 47.3   +26  57  z   Gem                  15.  p vS,  vF,  lbM,  diffic
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 2452   Pl   7 47.4   -27 20 s  Pup    0.3   13.  p PN , F, S, lE, am 60 st
 2450   Gx   7 47.5   +27 00 r  Gem          15.  p eF, vS, S* inv
 2453   OC   7 47.8   -27 14 s  Pup    5.     8.3  Cl, S, pRi, pC
 2446   Gx   7 48.7   +54 36 r  Lyn          14.  p F, am 4 st
 2455   OC   7 49.0   -21 18 s  Pup    8.    10.  p Cl, cL, pRi, lC, st 12
I2207   Gx   7 49.8   +33 57 u  Gem    2.0   15.  p vF, vS, dif, *15 vnr
 2454   Gx   7 50.5   +16 22 r  Gem          14.  p vF, eS, R, bM
 2459        7 52.0   +09 33 D  CMi              only a couple of F st
I 477   Gx   7 52.1   +23 28 z  Gem          15.  p F, pL, R, dif
 2441   Gx   7 52.2   +73 02 s  Cam    2.2   12.2  vF, pS
 2477   OC   7 52.3   -38 33 s  Pup   27.     5.8  !, Cl, B, Ri, L, lC, st 12
I2208        7 52.5   +27 30 d  Gem              F, S, R, dif
 2467  C+N   7 52.6   -26 23 s  Pup   16.     7.  p pB, vL, R, er, *8 M
I 478   Gx   7 53.7   +26 29 z  Gem          15.  p vF, vS, dif
 2456   Gx   7 54.1   +55 29 r  Lyn          14.  p vF, R, vgbM
 2470   Gx   7 54.3   +04 27 s  CMi    2.2   14.  p eF, S, lE, bet 2 st
I 479   Gx   7 54.4   +27 00 z  Gem          15.  p pF, vS, R
 2457   Gx   7 54.7   +55 32 r  Lyn          15.  p F, pL, R, 2456 sp
 2478    -   7 54.7   -15 25 r  Pup              cluster
 2482   OC   7 54.9   -24 18 s  Pup   12.     7.3  Cl, L, cRi, vlC
 2479   OC   7 55.1   -17 43 s  Pup    7.    10.  p Cl, pL, pRi, pC, st S
I 480        7 55.3   +26 47 d  Gem              vF, pL, E ns, dif
 2458   Gx   7 55.4   +56 43 r  Lyn              vF, *12 close
 2483   OC   7 55.9   -27 56 s  Pup   10.     7.6  Cl, L, lC
 2502   Gx   7 55.9   -52 18 c  Car    2.1         pF, S, R, vgpmbM
I 469   Gx   7 56.    +85 10 v  Cep    2.3         F, S, E, sf 2300
 2461   Gx   7 56.0   +56 41 r  Lyn          15.  p *13 slightly nebulous
 2489   OC   7 56.2   -30 04 s  Pup    8.     7.9  Cl, pL, cRi, pC, st 11...13
I2209   Gx   7 56.2   +60 18 s  Cam    1.1   13.8  vF, S, lbM
 2462   Gx   7 56.7   +56 39 r  Lyn          14.  p vF, vS, vlbM
 2476   Gx   7 56.7   +39 56 r  Lyn          13.  p vS* in eF, S neb
 2485   Gx   7 56.7   +07 29 r  CMi          13.  p neb *12
I2220   Nb   7 56.8   -59 07 x  Car              !! L, E, spiral, * inv
 2460   Gx   7 56.9   +60 21 s  Cam    2.9   11.7  F, S, R, S* in centre
 2463   Gx   7 57.1   +56 40 r  Lyn          15.  p eF, R
I2210   Gx   7 57.1   +56 40 z  Lyn          15.  p eF, stell, *13 np
 2464   Gx   7 57.2   +56 41 m  Lyn    0.4   15.  p pS Cl, st eF, nebulous
 2480   Gx   7 57.2   +23 47 r  Gem          15.  p vF, E np sf, close np 2481
 2481   Gx   7 57.3   +23 46 r  Gem          13.  p F, S, lE, bM, er
 2465    -   7 57.7   +56 45 r  Lyn              *, nebulous?
I2211   Gx   7 57.7   +32 34 u  Gem    0.8   14.  p pB, S, R, FN, r
 2474   Gx   7 57.9   +52 51 s  Lyn    0.6   14.  p F, pS, E?, bM vS*?  L* nf
 2486   Gx   7 57.9   +25 09 r  Gem          14.  p vF, S, psbM
 2468   Gx   7 58.0   +56 22 s  Lyn    1.3   15.  p F, R, bM
 2475   Gx   7 58.0   +52 51 s  Lyn    0.8   14.  p makes a Dneb with 2474
 2469   Gx   7 58.1   +56 41 s  Lyn    1.1   13.  p F, vS, R, *9 sf
 2471    *   7 58.3   +56 45 r  Lyn              *13, slightly nebulous
 2487   Gx   7 58.3   +25 08 s  Gem    2.8   14.  p vF, S, gbM
 2516   OC   7 58.3   -60 52 s  Car   30.     3.8  Cl, vB, vL, pRi, st 7...13
 2473    -   7 58.4   +56 41 r  Lyn              1 of 10 neb, in line with 2463, 69; =
    2472?
 2491   Gx   7 58.4   +07 59 r  CMi          15.  p only a few st 14, v diffic, *10 p
 2484   Gx   7 58.5   +37 47 s  Lyn    1.6   15.  p vF, vS, R, bM, r?
 2472   Gx   7 58.6   +56 42 r  Lyn          15.  p 1 of 10 neb, in line with 2463, 2469
 2496   Gx   7 58.6   +08 02 r  CMi          15.  p vF, pS, R, lbM, *11 3s  p
 2501   Gx   7 58.6   -14 22 r  Pup          14.  p cF, S, vlE 90deg , glbM, am st
 2499   Gx   7 58.8   +07 30 r  CMi          15.  p eF, pS, iR
I 481   Gx   7 59.0   +24 09 u  Gem    1.1   15.  p vF, vS, dif
I2212   Gx   7 59.0   +32 37 m  Gem    0.5   15.  p F, pL, vlbM, dif
I2213   Gx   7 59.0   +27 28 m  Gem    0.7   15.  p F, S, R, lbMN
 2490   Gx   7 59.2   +27 05 r  Gem          15.  p vF, S, R, *13 1' f, p of 2
 2494   Gx   7 59.2   -00 38 r  Mon          14.  p F, S, lE; = IC 487
I 487        7 59.2   -00 40 x  Mon              eeF, vS, E 110deg ; = 2494
 2492   Gx   7 59.4   +27 02 r  Gem          14.  p vF, S, R, bM, f of 2
I2216        7 59.5   +05 36 d  CMi              vF, eS, sbM
 2498   Gx   7 59.6   +24 58 r  Gem          14.  p vF, vS, R, bMN
I2215   OC   7 59.6   +24 55 x  Gem              Cl, vS, 30"
 2504   Gx   7 59.8   +05 37 r  CMi          14.  p vF, S, R
I 482   Gx   7 59.8   +25 21 m  Gem    0.6   15.  p vF, S, dif, diffic
I 483        7 59.9   +25 55 d  Gem              F, S, bM, F* nf
I 484   Gx   7 59.9   +26 40 z  Gem          15.  p F, vS, R, bM
I2214   Gx   7 59.9   +33 18 u  Lyn    0.8   14.  p pB, S, R, gbMN
 2506   OC   8 00.2   -10 47 s  Mon    7.     7.6  Cl, pL, vRi, C, st 11...20
I 485   Gx   8 00.3   +26 42 u  Gem    1.4   15.  p vF, vS, R, sbM
I 486   Gx   8 00.3   +26 37 u  Gem    1.0   15.  p F, S, dif, gbM
 2493   Gx   8 00.4   +39 50 s  Lyn    2.5   13.  p cB, S, R, sbM
 2495   Gx   8 00.6   +39 50 v  Lyn    0.4         follows 2493 2' or 3', eF, vS
 2503   Gx   8 00.6   +22 24 r  Cnc          15.  p eF, S, glbM
 2509   OC   8 00.7   -19 04 s  Pup    8.     9.  p Cl, B, pRi, lC, st S
I 488        8 00.8   +25 54 d  Cnc              vF, S, dif, *13 sp
I2217   Gx   8 00.8   +27 30 u  Cnc    0.6   14.  p F, pS, R, dif, r
 2507   Gx   8 01.6   +15 43 s  Cnc    2.5   14.  p pB, pL, iR, vgbM, er, * at 232deg , 80"
I 489        8 01.6   +26 00 D  Cnc              vF, vS, sbM
I2218   Gx   8 01.6   +24 26 z  Cnc          16.  p F, S, R, *14 vnr
 2488   Gx   8 01.8   +56 34 r  Lyn          14.  p vF, vS, R, glbM
 2500   Gx   8 01.9   +50 44 s  Lyn    2.9   11.6  F, L, R, vgbM, r, am st
 2508   Gx   8 02.0   +08 34 r  CMi          14.  p F, vS, vlE, 2 st p
 2510   Gx   8 02.2   +09 29 r  CMi          14.  p no description
 2497   Gx   8 02.3   +56 57 r  Lyn          14.  p eF, vS
 2511   Gx   8 02.3   +09 24 r  CMi          15.  p eF, 2513 nf
 2513   Gx   8 02.5   +09 25 r  Cnc          13.  p F, S, R, psmbM, r
 2520        8 02.5   -28 11 A  Pup              Cl, B, pRi, pC; = 2527
I2219   Gx   8 02.6   +27 27 u  Cnc    1.5   14.  p F, pS, E 135deg , gbM, r
 2514   Gx   8 02.8   +15 49 s  Cnc    1.4   14.  p eF, pS, irrR, dif
 2517   Gx   8 02.8   -12 19 s  Pup    0.8   12.3  F, vS, R, bet 3 st 13-14
 2512   Gx   8 03.1   +23 24 s  Cnc    1.7   14.  p vF, S, iR
I 490   Gx   8 03.3   +25 48 z  Cnc          16.  p eF, eS, S* f
 2515        8 03.4   +20 11 d  Cnc              vF, cometic
I 491   Gx   8 03.8   +26 32 z  Cnc          15.  p vF, eS, R
 2505   Gx   8 04.0   +53 34 r  Lyn          14.  p eF, vS
I2221        8 05.1   +37 27 d  Lyn              vF, vS, R, diffic
I2222        8 05.2   +37 29 d  Lyn              F, S, R, dif, r
 2527   OC   8 05.3   -28 10 s  Pup   22.     6.5  Cl, vL, pRi, lC, st 10...15
 2525   Gx   8 05.6   -11 26 s  Pup    2.9   11.6  cF, pL, R, vgvlbM, am st
I 492   Gx   8 05.7   +26 10 v  Cnc    1.3         pB, vgbM, E ns, *13.5 sf
I2223        8 05.8   +37 28 d  Lyn              F, S, R, dif
I2224        8 05.8   +37 28 d  Lyn              vF, vS, R, vlbM, diffic
 2522   Gx   8 06.1   +17 43 r  Cnc          14.  p vF, vS, E, psbM
I2226   Gx   8 06.2   +12 32 v  Cnc    1.4         F, S
I 494   Gx   8 06.4   +01 02 u  CMi    1.4   14.  p vF, pS, bM
I2225        8 06.4   +35 56 d  Lyn              F, pS, gbM, r
 2526   Gx   8 06.9   +08 01 r  Cnc          14.  p vF, S, mE
 2533   OC   8 07.0   -29 54 s  Pup    4.     7.6  Cl, pL, Ri, C, st 9, 13...14
I2228   Gx   8 07.1   +08 02 m  Cnc    0.4   15.  p eF, S, r
 2518   Gx   8 07.3   +51 09 r  Lyn          14.  p 1st of 2 neb, F, L, R, gbM
I2227        8 07.3   +36 02 d  Lyn              F, vS, gbMN, r, *13.5 vnr
 2528   Gx   8 07.4   +39 13 r  Lyn          13.  p F, S, R, bM
I 493        8 07.4   +25 06 d  Cnc              pB, E ns
 2529   Gx   8 07.8   +17 50 r  Cnc          14.  p eF (suspected)
 2530        8 07.9   +17 49 d  Cnc              eF, lE, vS* n
 2519        8 08.0   +51 07 d  Lyn              F, L, R, gbM, 42s  f 2518
 2531        8 08.0   +17 49 d  Cnc              vF
 2524   Gx   8 08.1   +39 10 r  Lyn          13.  p vF, S
I 495   Gx   8 08.3   +09 00 z  Cnc          15.  p vF, vS, R, gvlbM
 2521   Gx   8 08.8   +57 46 s  Lyn    1.5   14.  p pF, pL, R, psbM, *9 np 3'
I 498   Gx   8 09.4   +05 16 u  CMi    1.4   15.  p F, pS, R
I 496   Gx   8 09.7   +25 52 m  Cnc    0.3   15.  p pF, S, E pf, lbM
I2229        8 09.7   +25 53 d  Cnc              F, S, R, lbMN, r
I 497   Gx   8 10.1   +24 53 m  Cnc    0.5   15.  p F, S, R, lbM
 2532   Gx   8 10.2   +33 57 s  Lyn    2.2   12.4  pB, pL, R, vglbM, r, 2 st nf
 2539   OC   8 10.7   -12 50 s  Pup   22.     6.5  Cl, vL, Ri, lC, st 11...13

 2547   OC   8 10.7   -49 16 s  Vel   20.     4.7  Cl, B, L, lC, st 7...16
I2230   Gx   8 10.9   +25 41 z  Cnc          16.  p F, vS, dif
I2231   Gx   8 11.0   +05 05 u  CMi    2.0   15.  p F, vS, R, dif, *14 att
 2535   Gx   8 11.2   +25 12 s  Cnc    3.0   12.6  eF, vS, R
 2536   Gx   8 11.3   +25 11 s  Cnc    0.9   14.1  vF, vS, R
 2542    -   8 11.3   -12 56 r  Pup              nebulous *5
 2538   Gx   8 11.4   +03 37 r  CMi          14.  p vF, vS, R, mbM
 2546   OC   8 12.4   -37 38 s  Pup   41.     6.3  Cl, B, L, lC, iE, st 9...12
I 500   Gx   8 12.6   -16 03 m  Pup    0.7   15.  p vF, dif, vF* att
 2540   Gx   8 12.8   +26 21 r  Cnc          14.  p vF, pL, iR, bM, r
 2534   Gx   8 12.9   +55 40 s  Lyn    1.7   14.  p pF, pL, R, psbM, *8 164deg
I2232        8 12.9   +36 15 x  Lyn              F, pS, R, gbMN; = 2543
 2543   Gx   8 13.0   +36 15 s  Lyn    2.5   13.  p F, pL, iR, vgbM, D* nr; = IC 2232
 2537   Gx   8 13.2   +46 00 s  Lyn    1.7   11.7  glob. cl. , pB, pL, R, rrr, st 20
I2235        8 13.6   +24 05 d  Cnc              pB, S, E 135deg , dif
I2236        8 13.6   +24 03 d  Cnc              pB, E 0deg , dif
 2548   OC   8 13.8   -05 48 s  Hya   54.     5.8  Cl, vL, pRi, pmC, st 9...13; = M48
I2234        8 13.9   +35 30 d  Lyn              pF, vS, dif, vFN
I2233   Gx   8 14.0   +45 44 s  Lyn    4.7   13.0  pB, L, E np sf; 2537 np
I2237        8 14.1   +24 41 d  Cnc              vF, pS, p dif
I2238        8 14.1   +24 40 d  Cnc              pF, S, dif
I2239   Gx   8 14.1   +23 52 m  Cnc    1.0   15.  p pB, S, R, stell N
 2545   Gx   8 14.2   +21 21 s  Cnc    2.2   12.4  F, S, lE 45deg , *8 np 4'
 2541   Gx   8 14.7   +49 04 s  Lyn    6.6   11.8  F, L, E, vgbM
I2240        8 14.8   +24 28 d  Cnc              vF, S, E 155deg , dif
 2523   Gx   8 15.0   +73 35 s  Cam    3.0   12.0  pB, pL, lE, lbM, * nr
I2241        8 15.1   +24 08 d  Cnc              pB, S, dif
I2242        8 15.2   +24 08 d  Cnc              pF, S, dif
I2243        8 15.3   +23 58 d  Cnc              F, S, dif, biN
I2244        8 15.4   +24 33 d  Cnc              vF, S, E 0deg
I2245        8 15.5   +24 32 d  Cnc              vF, S, iF
I2246        8 16.0   +23 51 d  Cnc              pB, S, dif, bf
I2247        8 16.1   +24 12 d  Cnc              pF, E 135deg , biN
I2248   Gx   8 16.1   +23 08 m  Cnc    0.4   15.  p pB, pL, E 90deg , Nn
I2250        8 16.5   +23 38 d  Cnc              F, S, dif
I2253   Gx   8 16.5   +21 25 z  Cnc          15.  p F, vS, R, stell
I2249        8 16.6   +24 30 d  Cnc              F, vS, iF, att* sp
I2251        8 16.7   +23 57 d  Cnc              pF, pS, dif
I2252        8 16.7   +24 42 d  Cnc              pF, S, R
I2254   Gx   8 16.7   +24 47 z  Cnc          15.  p F, S, R, stell, *13.5 vnr
I2255        8 16.7   +23 27 d  Cnc              vF, pL, N
I2256   Gx   8 16.8   +24 11 m  Cnc    0.6   15.  p B, pS, E 205deg
 2559   Gx   8 17.1   -27 28 t  Pup    5.6         F, pL, gmbM, am 60 st
I2257        8 17.2   +23 39 d  Cnc              F, S, lbM
I2258        8 17.3   +23 35 d  Cnc              pF, S, mE 0deg , biN
I2259        8 17.3   +23 34 d  Cnc              vF, S, dif, diffic
I2262    ?   8 17.4   +18 27 x  Cnc              pB, S, B* nf
I2260        8 17.5   +24 40 d  Cnc              pF, S, R, dif
I2261        8 17.6   +23 31 d  Cnc              vF, mE 45deg , B* 1' f
 2553   Gx   8 17.7   +20 54 r  Cnc          15.  p vF, S, glbM
I2263        8 17.7   +23 35 d  Cnc              vF, S, E 0deg , vlbM
I2266    ?   8 17.7   +18 25 x  Cnc              pB, vS, mE, B* att
I2264        8 17.8   +23 43 d  Cnc              pB, S, stell N
I2265        8 17.8   +24 12 d  Cnc              pF, vS, R, dif
 2554   Gx   8 17.9   +23 28 s  Cnc    3.4   14.  p F, S, R, mbM, r
 2555   Gx   8 18.0   +00 44 r  Hya          13.  p vF, cS, iF, 3 S st inv?
 2568   OC   8 18.0   -37 06 r  Pup              vF, pL, F* inv
I2267   Gx   8 18.0   +24 44 u  Cnc    2.3   15.  p pB, mE 137deg
I2270    ?   8 18.0   +19 06 x  Cnc              pB, S, * vnr np
I2268   Gx   8 18.1   +24 48 z  Cnc          15.  p pF, S, R, glbM
I2272    ?   8 18.1   +18 44 x  Cnc              vF, vS, gbM, * att
I2269   Gx   8 18.2   +23 03 z  Cnc          16.  p pF, S, E 25deg
I2273    ?   8 18.2   +18 24 x  Cnc              pF, S, bM
I2274  ***   8 18.2   +18 40 x  Cnc              pB neb*, 2 spir branches
I2275    ?   8 18.2   +18 25 x  Cnc              pB, S, gbM
I2271   Gx   8 18.4   +24 31 z  Cnc          15.  p pB, S, bM
I2276    ?   8 18.5   +18 29 x  Cnc              iF, conn with IC 2278, 80
I2277    ?   8 18.5   +18 39 x  Cnc              pF, vS, iF
 2564   Gx   8 18.6   -21 49 r  Pup              vF, S, R, gbM, am many st
 2567   OC   8 18.6   -30 38 s  Pup   10.     7.4  Cl, pL, pRi, lC, iR, st 11...14
I2278    ?   8 18.6   +18 28 x  Cnc              iF, conn with IC 2276, 80
I2279    ?   8 18.6   +18 34 x  Cnc              F, S, dif
 2566   Gx   8 18.7   -25 29 s  Pup    3.1   15.  p vF, cL, er, vS neb or neb *11 with *12
    close
I2280    ?   8 18.7   +18 27 x  Cnc              pF, iF, conn with IC 2276, 78
I 501   Gx   8 18.8   +24 32 z  Cnc          15.  p F, R, lbM
I2311   Gx   8 18.8   -25 22 c  Pup    2.2         pB, vS, R, lbM, 6' n of 2566
 2571   OC   8 18.9   -29 44 s  Pup   13.     7.0  Cl, vL, cRi, lC, st 9...
I2281    ?   8 18.9   +18 55 x  Cnc              * att 51deg , spir br
 2549   Gx   8 19.0   +57 48 s  Lyn    4.2   11.1  pB, S, mE 0deg , psmbM
I2284    ?   8 19.0   +18 36 x  Cnc              F, S, dif, stell N, * vnr sf
I2285        8 19.1   +18 55 d  Cnc              pF, S, curved N, conn with IC 2281
I2286        8 19.1   +18 57 d  Cnc              pB, vS, E 50deg
I2287        8 19.1   +19 24 d  Cnc              vF, pS, lbM, dif
I2289    ?   8 19.1   +18 32 x  Cnc              pF, S, iF
 2556   Gx   8 19.2   +20 55 r  Cnc          15.  p vF, vS
 2557   Gx   8 19.2   +21 27 s  Cnc    1.4   15.  p eF, eS, R, lbM
 2552   Gx   8 19.3   +50 01 s  Lyn    3.2   12.2  eF, cL, lE 45deg
I2282        8 19.3   +24 48 d  Cnc              pF, L, dif, * sf
I2283        8 19.3   +24 47 d  Cnc              pF, pS, R, *9 f 4s .6, 35" s
I2288   Gx   8 19.3   +23 46 m  Cnc    0.3   15.  p F, S, E 90deg , bM, dif
I2290    ?   8 19.3   +19 19 x  Cnc              pF, pS, dif, others nr
I2291    ?   8 19.3   +18 30 x  Cnc              vF, S, mE 125deg , gbM
 2558   Gx   8 19.4   +20 30 r  Cnc          14.  p vF, S, R, sbM, stellar
I2292        8 19.4   +19 34 d  Cnc              pF, vS, E 135deg , bM
I2294        8 19.4   +18 59 d  Cnc              pF, vS, iF
I2295        8 19.4   +18 25 d  Cnc              F, vS, E 90deg , vF stell N, B* sf
I2296        8 19.5   +18 54 d  Cnc              pF, vS, iF, vlbM
 2561   Gx   8 19.6   +04 39 r  Hya          14.  p vF, S, R, 2 st triangle
I2293   Gx   8 19.6   +21 23 m  Cnc    0.8   15.  p F, pS, dif
 2565   Gx   8 19.8   +22 02 s  Cnc    1.9   14.  p F, biN
 2560   Gx   8 19.9   +20 59 s  Cnc    1.7   15.  p F, pL
I2297        8 20.1   +18 23 d  Cnc              pB, S, others nr
I2298        8 20.1   +18 24 d  Cnc              pF, S, iF, Ns, * close nf
I2299        8 20.2   +19 20 d  Cnc              F, vNE 60deg
I2300        8 20.2   +18 25 d  Cnc              F, pS, iF, arms n and p
I2301        8 20.2   +18 26 d  Cnc              vF, S, mE, exc N, * sf
I2302        8 20.3   +19 21 d  Cnc              F, vS, R, vlbM
I2303        8 20.3   +19 25 d  Cnc              F, vS, mE 0deg
 2562   Gx   8 20.4   +21 08 s  Cnc    1.4   12.9  vF, cS, R
 2563   Gx   8 20.6   +21 04 s  Cnc    2.3   12.3  cF, S, R, bM
I2304        8 20.6   +19 26 d  Cnc              B, vS, neb*
I2305        8 20.7   +19 27 d  Cnc              vF, S, N
I2306        8 20.7   +19 07 d  Cnc              F, vS, R, bM
I2307        8 20.7   +19 26 d  Cnc              pB, pS, dif, E 0deg
 2574   Gx   8 20.8   -08 57 r  Hya          14.  p eF, pS, rr, *7.5 nf 5'
I2309   Gx   8 20.8   +18 23 z  Cnc          16.  p vF, pS, E 165deg
I2310        8 20.8   +18 28 d  Cnc              pB, pS, mE 40deg , curved mbM
I2308   Gx   8 20.9   +19 21 m  Cnc    0.3   16.  p pB, vS, iF, bM
I2312        8 20.9   +18 31 d  Cnc              vF, S, E 45deg , dif, vlbM
I2313        8 20.9   +18 31 d  Cnc              vF, vS, vF stell N
 2579  C+N   8 21.1   -36 11 s  Pup   10.     7.5  D* in pS neb, am 70 st
I2314        8 21.1   +18 46 d  Cnc              F, S, spir, vlbM
I2315        8 21.2   +18 55 d  Cnc              F, vS, R, dif, N
I2316        8 21.3   +19 46 d  Cnc              pB, S, R, exc stell N
 2572   Gx   8 21.4   +19 08 r  Cnc          15.  p eF, vS, iF, *13 att
 2578   Gx   8 21.4   -13 19 s  Pup    2.4   12.4  F, vlE, gbM, r, am 50 st
I2317        8 21.4   +18 51 d  Cnc              F, vS, dif, vF stell N
I2327   Gx   8 21.4   +03 10 u  Hya    1.5   14.  p F, S, dif
 2569   Gx   8 21.5   +20 52 r  Cnc          15.  p vF, cE, 3 vS st f
 2570   Gx   8 21.5   +20 55 r  Cnc          15.  p eeF, L, R, n of 2
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I2318       8 21.5   +18  37  d  Cnc                F, vS,  N
 2580   OC  8 21.6   -30  19  s  Pup    8.    10.  p Cl,  cL,  pRi,  pC,  R,  st 12
I2319       8 21.6   +18  29  d  Cnc                F, S,  R
I2320       8 21.6   +18  40  d  Cnc                F, vS,  N
 2544   Gx  8 21.7   +73  59  s  Cam    1.1   12.  p eeF,  pS,  R,  sev  B st  around
I2321       8 21.7   +18  28  d  Cnc                pB,  vS,  R
I2322       8 21.7   +18  29  d  Cnc                F, S,  dif
I2323       8 21.7   +18  37  d  Cnc                pF,  S,  R
I 502  Gx   8 22.0   +08  45  k  Cnc    0.4   15.  p F,  vS,  dif
I2324       8 22.0   +19  12  d  Cnc                pF,  S,  mE 155deg  ,  sev  N
I2325       8 22.1   +18  55  d  Cnc                vF,  pL,  iF,  F* att  f
I 503  Gx   8 22.2   +03  15  u  Hya    1.1   14.  p vF,  S,  lE
I2326       8 22.2   +19  01  d  Cnc                vF,  mE  90deg  ,  dif,  sev  N
I2328       8 22.3   +19  37  d  Cnc                pB,  pS,  mE  65deg
I2329  Gx   8 22.4   +19  24  u  Cnc    2.2   15.  p pF,  pS,  mE  110deg  ,  stell  N
I2330       8 22.4   +18  51  d  Cnc                B,  vS,  stell,  2 spir  branches
I 504  Gx   8 22.6   +04  15  u  Hya    1.1   14.  p vF,  pS,  R,  4 st  f
I2331       8 22.6   +19  41  d  Cnc                vF,  pL,  R,  dif
 2577   Gx  8 22.7   +22  33  s  Cnc    2.1   13.  p F,  S,  iF,  r
I2332       8 22.7   +19  55  d  Cnc                pB,  vS,  R,  stell  N,  F* att  s
 2575   Gx  8 22.8   +24  17  s  Cnc    2.5   14.  p eF,  pL,  iR,  sev  F st  inv
 2576   Gx  8 22.9   +25  44  r  Cnc               15.  p eF,  eS,  stellar
I2333       8 23.0   +19  05  d  Cnc                F, S,  R,  N
I2334       8 23.0   +18  37  d  Cnc                pF,  S,  R
I2335       8 23.1   +19  25  d  Cnc                F, pS,  vlbN,  dif,  biN
 2583   Gx  8 23.2   -05  01  s  Hya    0.7   13.5   vF,  S,  R,  sbNN,  1st  of  4
 2584   Gx  8 23.2   -05  00  r  Hya               14.  p vF,  S,  R,  2nd  of  4
 2588   OC  8 23.2   -32  59  s  Pup    2.    12.  p Cl,  F,  S,  R,  gbM,  st  15
I 505  Gx   8 23.3   +04  22  u  Hya    1.4   15.  p eF,  S,  R,  lbM
I2336       8 23.3   +18  32  d  Cnc                vF,  vS,  R
I2337       8 23.3   +18  32  d  Cnc                F, vS,  R
 2585   Gx  8 23.4   -04  56  r  Hya               14.  p vF,  S,  R,  3rd  of  4
I 506  Gx   8 23.4   +04  18  m  Hya    0.4   15.  p eeF,  eS,  R,  v  diffic
 2587   OC  8 23.5   -29  30  s  Pup    9.     9.  p Cl,  pmCM,  iF,  st  9...13
I2342       8 23.5   +18  35  d  Cnc                pB,  S,  R,  *12  att  112deg
I2338  Gx   8 23.6   +21  20  v  Cnc    0.6           F, vS,  bMN
I2339  Gx   8 23.6   +21  20  v  Cnc    1.2           F, S,  R,  bMN
I2340  Gx   8 23.6   +18  44  m  Cnc    0.8   15.  p pF,  pS,  dif,  bMN
I2341  Gx   8 23.7   +21  26  v  Cnc    1.6           F, S,  R,  bMN
I2343       8 23.9   +19  01  d  Cnc                F, pS,  lbM,  dif
I2344       8 23.9   +18  39  d  Cnc                pF,  pS,  R,  lbM
I2345       8 24.1   +19  57  d  Cnc                F, S,  E 90deg  , att  B* sp
I2346       8 24.2   +19  42  d  Cnc                vF,  S,  R,  bM,  2nd  vnr  sf
I2347       8 24.2   +18  46  d  Cnc                vF,  S,  iF,  dif
I2367  Gx   8 24.2   -18  46  c  Pup    2.3           pB,  S
I2349       8 24.3   +19  00  d  Cnc                pF,  L,  lbM,  dif
 2586  ***  8 24.4   -04  56  F  Hya               15.  p eF,  pS,  R,  4th  of  4 (neb?)
I2348  Gx   8 24.4   +20  32  m  Cnc    0.6   16.  p F,  pS,  mE  45deg  ,  bM
 2581   Gx  8 24.5   +18  35  r  Cnc               14.  p vF,  vS,  R,  vF* inv,  F* att
 2589    -  8 24.5   -08  46  r  Hya                pF,  pS,  lE;  nonexistent?
I2350       8 24.5   +19  33  d  Cnc                vF,  S,  gbMN,  B* s
 2550   Gx  8 24.6   +74  01  s  Cam    1.2   13.  p eeF,  pS,  cE
I2351  Gx   8 24.6   +18  36  u  Cnc    1.1   14.  p pF,  pS,  iF,  F stell  N,  2581  f
I2353       8 24.6   +18  39  d  Cnc                pB,  S,  R,  spir  br
I2352       8 24.7   +19  36  d  Cnc                F, S,  lbM,  S neb  f
I2354       8 24.7   +18  40  d  Cnc                vF,  vS,  dif,  vFN
 2551   Gx  8 24.8   +73  25  s  Cam    1.9   12.0   vF,  S,  F* in  centre
I2355       8 24.9   +20  28  d  Cnc                pB,  S,  R,  stell  N
I2356       8 25.0   +19  30  d  Cnc                F, vS,  mE,  lbM
 2590   Gx  8 25.1   -00  36  r  Hya               14.  p F* inv  in  vF,  vS,  lE  neb
I2357       8 25.1   +19  31  d  Cnc                pF,  S,  R,  dif,  stell  N
I2358       8 25.1   +19  30  d  Cnc                F, S,  E 135deg  ,  FN,  vS  neb  f
I2360       8 25.2   +19  27  d  Cnc                F, S,  dif,  vFN  exc
 2582   Gx  8 25.3   +20  20  s  Cnc    1.3   14.  p vF,  pS,  R,  glbM,  * p 75";  = IC 2359
I2359  Gx   8 25.3   +20  20  u  Cnc    1.1   14.  p F,  vS,  E 160deg  ,  stell  N  exc  nf
 2601   Gx  8 25.5   -68  07  v  Vol    2.0           F, pS,  R,  gbM
I 507    ?  8 25.6   -00  27  x  Hya                eeF,  pS,  vlE,  bet  2 st
I2361  Gx   8 25.7   +27  53  u  Cnc    1.7   15.  p F,  pS,  lE ns,  gbM,  r
I2362       8 25.7   +19  57  d  Cnc                pF,  pL,  dif,  bet  4 B st
I2363  Gx   8 25.8   +19  27  v  Cnc                pF,  pL,  dif
I2364       8 25.9   +19  46  d  Cnc                pF,  S,  R,  bM
I2368       8 26.0   +19  53  d  Cnc                pF,  vS,  bMNE  170deg
I2365       8 26.3   +27  52  d  Cnc                pB,  vS,  R,  stell
I2366  Gx   8 26.3   +27  50  u  Cnc    1.4   15.  p pB,  vS,  R,  bMN
I2369       8 26.3   +20  14  d  Cnc                pB,  S,  R,  stell  N
I2375       8 26.3   -13  18  d  Pup                F, vS,  E 90deg  , 1st  of  3
I2370       8 26.4   +19  38  d  Cnc                pB,  vS,  iF,  N
I2377       8 26.4   -13  18  d  Pup                eF,  vS,  2nd  of  3
I2379       8 26.4   -13  18  d  Pup                vF,  vS,  3rd  of  3
I2371       8 26.6   +19  48  d  Cnc                pB,  S,  lE  90deg
I2372       8 26.7   +19  53  d  Cnc                F, S,  lE 135deg  ,  B* sf
 2593   Gx  8 26.8   +17  22  r  Cnc               15.  p eF,  vS
I2373  Gx   8 26.9   +20  22  u  Cnc    1.4   15.  p F,  S,  dif,  exc  N
 2592   Gx  8 27.1   +25  58  r  Cnc               13.  p pF,  S,  R,  vsbM  *
 2594   Gx  8 27.3   +25  52  r  Cnc               15.  p eF
 2596   Gx  8 27.4   +17  17  r  Cnc               14.  p vF,  S,  lE
 2595   Gx  8 27.7   +21  29  s  Cnc    3.1   14.  p vF,  pL,  iF,  R,  D* sp  2'
I2374       8 28.3   +30  26  d  Cnc                pF,  S,  R,  dif,  *11.5  close
I 508  Gx   8 28.4   +25  07  z  Cnc               15.  p F,  L,  R
I2376       8 28.4   +30  24  d  Cnc                F, vS,  R,  *14  close
I2381       8 28.4   +19  47  d  Cnc                pF,  S,  R  bM,  dif
I2378  Gx   8 28.5   +30  26  v  Cnc    0.9           F, S,  R,  glbM,  r
I2380  Gx   8 28.6   +30  25  m  Cnc    0.4   15.  p F,  S,  R,  lbM,  r
I2382  Gx   8 28.7   +22  04  m  Cnc    0.4   15.  p F,  S,  R,  r,  *12.5  close
 2609   OC  8 29.5   -61  06  A  Car                Cl,  pS,  lRi,  lC
I2383  Gx   8 29.6   +30  41  z  Cnc               16.  p F,  vS,  R,  bMN
 2597   Gx  8 30.0   +21  30  u  Cnc    1.4   15.  p eF,  vS
 2598   Gx  8 30.0   +21  29  s  Cnc    1.3   13.7   F, S
I 509  Gx   8 32.0   +24  00  v  Cnc    1.9           vF,  pL,  dif,  lbM
I 510  Gx   8 32.1   -02  10  u  Hya    1.1   15.  p F,  vS,  R,  dif
 2599   Gx  8 32.2   +22  34  s  Cnc    2.4   13.  p vF,  S,  stellar
I 513  Gx   8 33.0   -12  21  m  Hya    0.6   14.  p F,  S,  dif,  r
 2604   Gx  8 33.3   +29  33  r  Cnc               13.  p vF,  pL,  R,  lbM,  r,  D*  nr
 2610   Pl  8 33.4   -16  09  s  Hya    0.6   14.  p F,  S,  att  to  *13,  *7  nf
 2613   Gx  8 33.4   -22  58  s  Pyx    7.2   10.4   cB,  L,  vmE  110deg
 2612   Gx  8 33.8   -13  09  s  Hya    3.2   13.  p F,  S,  E,  psbM,  bet  2 st
 2607   Gx  8 33.9   +26  59  r  Cnc               15.  p eF
I2384  Gx   8 34.5   +32  26  m  Cnc    0.4   16.  p F,  S,  R,  stell
 2615   Gx  8 34.6   -02  32  r  Hya               13.  p F,  pS,  lE,  lbM,  F*  inv  r
 2600   Gx  8 34.8   +52  44  r  UMa               15.  p no  description
I2386       8 34.8   +25  49  d  Cnc                eF,  L,  e  dif
I2385  Gx   8 35.1   +37  17  m  Lyn    0.6   15.  p F,  S,  R,  dif,  r
 2602   Gx  8 35.2   +52  50  r  UMa               15.  p eF,  S,  R,  *  95deg
 2608   Gx  8 35.3   +28  28  s  Cnc    2.5   12.1   F, vlE,  mM,  r
 2605    -  8 35.4   +52  51  r  UMa                F, S,  lbM
I 514  Gx   8 35.4   -02  03  z  Hya               15.  p vF,  E  ns
 2603   Gx  8 35.5   +52  47  r  UMa               15.  p eF,  vS
 2611   Gx  8 35.5   +25  02  r  Cnc               15.  p vF,  S,  pmE,  gbM
I 515  Gx   8 35.5   -01  54  u  Hya    1.2   16.  p vF,  vS,  dif,  2616  nf
 2616   Gx  8 35.6   -01  51  s  Hya    1.3   12.6   vF,  S,  R,  *  nr  nf
 2626   Nb  8 35.6   -40  40  s  Vel    5.            *9  inv  in  pB,  pL,  R  neb
 2606   Gx  8 35.7   +52  48  r  UMa               15.  p cF,  S,  R,  *  310deg
 2617   Gx  8 35.7   -04  03  r  Hya               15.  p eF,  vS,  2 vF  st  inv
I 516  Gx   8 35.8   -01  52  z  Hya               16.  p vF,  vS,  dif,  2616  p
 2618   Gx  8 36.2   +00  42  D  Hya               14.  p eF,  pL,  iF
I 517  Gx   8 36.3   -02  04  z  Hya               15.  p vF,  S,  iF
I 518  OC   8 37.1   +00  41  x  Hya                vF  (vS  Cl?)
 2627   OC  8 37.3   -29  57  s  Pyx   11.     8.  p Cl,  cL,  pRi,  pC,  st  11...13
 2591   Gx  8 37.4   +78  02  s  Cam    3.2   13.  p F,  S,  E,  lbM
 2640   Gx  8 37.4   -55  07  c  Car    2.5           pB,  S,  R,  3 or  4 vS  st  p  nr
 2620   Gx  8 37.5   +24  57  r  Cnc               15.  p F,  S,  E
 2619   Gx  8 37.6   +28  43  r  Cnc               13.  p F,  pS,  R,  bM,  r
 2621   Gx  8 37.7   +25  00  r  Cnc               15.  p vF,  S,  R
 2624   Gx  8 38.1   +19  44  r  Cnc               14.  p eF
 2622   Gx  8 38.3   +24  55  r  Cnc               15.  p F,  S,  R
 2623   Gx  8 38.4   +25  45  s  Cnc    0.6   13.8   vF,  vS,  R,  bM,  r
 2625   Gx  8 38.4   +19  42  s  Cnc    0.4           eF,  vS
 2635   OC  8 38.5   -34  46  s  Pyx    3.    11.2   Cl,  pmC,  irr  triangle,  st  13...
I2387  Gx   8 38.6   +30  47  u  Cnc    1.2   15.  p F,  pS,  E ns,  gbM
 2645    -  8 38.9   -46  13  r  Vel                Cl,  S,  st  L and  S
I2388  Gx   8 40.0   +19  38  z  Cnc               16.  p eF,  S,  dif  (FN?);  *10  n  90"
 2632   OC  8 40.1   +19  59  s  Cnc   95.     3.1   Praesepe;  = M44
I2391  OC   8 40.2   -53  04  s  Vel   50.     2.5   Cl,  co,  incl  *3.7  (o Vel)
 2628   Gx  8 40.5   +23  33  r  Cnc               14.  p eF,  S
I 519  Gx   8 40.6   +02  36  z  Hya               15.  p vF,  vS,  R,  diffic,  *14  close
 2642   Gx  8 40.7   -04  07  s  Hya    2.3   13.  p vF,  pL,  gbM,  2 B st  s,  one  f
I 511  Gx   8 40.8   +73  29  v  Cam    1.7           vF,  S,  cE,  2 st  sf
 2637   Gx  8 41.1   +19  42  r  Cnc                eeF,  vS
I2395  OC   8 41.1   -48  12  s  Vel    8.     4.6   Cl,  co
 2644   Gx  8 41.5   +04  59  r  Hya               13.  p vF,  pL,  irr  oval,  sev  S points
 2643   Gx  8 41.7   +19  43  r  Cnc                eF  neb*
I2390  Gx   8 41.8   +19  42  z  Cnc               16.  p iF,  gbM,  *10  sf  1'.5,  *12  nf  1'
 2660   OC  8 42.2   -47  09  s  Vel    4.     8.8   Cl,  pS,  mC,  iR,  gbM,  st  13...15
 2638   Gx  8 42.4   +37  13  r  Lyn               13.  p vF,  vS,  iF
 2647   Gx  8 42.6   +19  40  r  Cnc               15.  p neb*
 2659   OC  8 42.6   -44  57  s  Vel    3.     8.6   Cl,  L,  Ri,  pmE,  st  11...14
 2648   Gx  8 42.7   +14  17  s  Cnc    3.6   13.  p F,  S,  vlE  135deg  ,  psbM
 2614   Gx  8 42.8   +72  59  s  UMa    2.8   14.  p eF,  pS,  R
 2652    -  8 43.3   -03  37  D  Hya                F, pS,  E 50deg  ,  gbM,  stell  N,  *9  sp  50";
    place?
 2658   OC  8 43.4   -32  39  s  Pyx   12.     9.  p Cl,  pS,  lRi,  lC,  iF,  st  12-13
 2639   Gx  8 43.6   +50  12  s  UMa    2.0   11.8   cB,  S,  E 130deg  ,  psmbM
 2651   Gx  8 44.0   +11  47  r  Cnc               15.  p eF,  S,  E
 2649   Gx  8 44.1   +34  43  s  Lyn    1.9   13.  p F,  L,  R,  r
I2392  Gx   8 44.5   +18  17  x  Cnc                pB,  pS,  E 180deg  ,  vlbM
 2669   OC  8 44.9   -52  58  s  Vel   12.     6.1   Cl,  L,  P,  lC,  st  10...13
 2663   Gx  8 45.1   -33  48  v  Pyx               16.  p 1st  of  2 vF,  vS,  vnr  2629
 2657   Gx  8 45.4   +09  40  r  Cnc               14.  p vF,  vS,  iR,  F*  att  f
 2670   OC  8 45.5   -48  47  s  Vel    9.     7.8   Cl,  pL,  P,  lC,  st  13...
 2662   Gx  8 45.7   -15  08  r  Hya               15.  p vF,  vS,  R,  bM,  *15  nr
I 499  Gx   8 46.    +85  43  m  Cam    1.9   14.  p pF,  S,  mbM,  *  nf
 2661   Gx  8 46.0   +12  38  r  Cnc               14.  p eF,  cL,  R,  lbM
 2665   Gx  8 46.0   -19  17  r  Hya               13.  p F,  S,  R,  gbMN
 2671   OC  8 46.2   -41  53  s  Vel    4.    12.  p Cl,  pRi,  lCM,  st  12...13
I2403       8 46.2   -15  21  d  Hya                vF,  eS,  lE
I2396  D*   8 46.7   +17  39  x  Cnc                vF,  vS
I2397   ?   8 46.7   +17  40  x  Cnc                F, vS,  R
I2398  Gx   8 46.7   +17  45  x  Cnc                pB,  S,  R,  bM
I 521       8 46.8   +02  33  d  Hya                neb  *13
I2393  Gx   8 46.8   +28  11  u  Cnc    1.4   15.  p F,  S,  R,  N,  r
 2631   Gx  8 47.1   +73  00  m  UMa    0.8   14.  p 2nd  of  2 vF,  vS,  vnr  2629
I2394  Gx   8 47.1   +28  16  u  Cnc    1.7   15.  p F,  S,  R,  gbM
 2629   Gx  8 47.2   +72  59  s  UMa    2.6   13.  p vF,  S,  stellar
 2664    -  8 47.2   +12  36  r  Cnc                Cl,  st  9...10
 2656   Gx  8 47.8   +53  52  s  UMa    1.5   13.3   eF,  psbM
I2399  Gx   8 47.8   +18  54  x  Cnc                vF,  pL,  E 190deg  ,  bs
I2389  Gx   8 48.0   +73  32  s  Cam    1.7   13.4   vF,  S,  lbM
I2400  Gx   8 48.0   +38  06  m  Lyn    0.6   15.  p F,  S,  stell
 2633   Gx  8 48.1   +74  06  s  Cam    2.6   11.9   F,  S,  lE
 2641   Gx  8 48.1   +72  54  r  UMa               15.  p vF,  S,  stellar
I2401  Gx   8 48.1   +37  45  u  Lyn    1.3   15.  p F,  S,  R,  N,  r
I2402  Gx   8 48.1   +31  49  m  Cnc    0.4   15.  p F,  S,  R,  gbMN,  r
I2404  Gx   8 48.1   +29  30  z  Cnc               15.  p F,  S,  R,  sbNN
I2406  Gx   8 48.1   +17  42  x  Cnc                B,  pS,  E 165deg
I2407  Gx   8 48.1   +17  37  x  Cnc                pB,  pS,  mE  80deg
 2674    -  8 48.2   -14  17  r  Hya                eF,  S;  nonexistent?
 2667   Gx  8 48.3   +19  01  r  Cnc               15.  p eF;  = IC 2410
I2408    *  8 48.3   +19  02  x  Cnc                pF,  vS,  R
 2634   Gx  8 48.4   +73  58  s  Cam    2.2   13.  p F,  S,  lE
 2636   Gx  8 48.4   +73  40  s  Cam    0.5   14.  p vF,  S,  2 st  11-12  f
I2409  Gx   8 48.4   +18  20  x  Cnc                pB,  pL,  bM,  *15  p
I2410  Gx   8 48.5   +19  01  x  Cnc                pB,  S,  E 90deg  ,  stell  N
I2411  Gx   8 48.5   +19  03  x  Cnc                vF,  S,  E 235deg
I2405  Gx   8 48.7   +37  14  m  Lyn    0.4   15.  p F,  S,  R,  gbM
 2654   Gx  8 49.2   +60  13  s  UMa    4.3   11.8   pF,  S,  F* in  M,  F*  close  sp
 2672   Gx  8 49.3   +19  04  s  Cnc    2.6   11.6   pB,  pL,  iR,  mbM
 2668   Gx  8 49.4   +36  41  r  Lyn               15.  p vF,  vS,  R,  r
 2673   Gx  8 49.4   +19  04  s  Cnc    1.4   12.9   vF,  vS,  close  f  2672
I2412  D*   8 49.4   +18  33  x  Cnc                pB,  S,  R,  N,  *14  np
I2413  D*   8 49.5   +18  45  x  Cnc                pF,  vS,  FN
I2414  Gx   8 49.8   +18  48  x  Cnc                pF,  vS,  R,  vlbM
 2650   Gx  8 50.0   +70  18  s  UMa    1.9   14.  p pB,  pL,  iF,  er
 2666    -  8 50.0   +47  03  r  UMa                Cl,  lC
 2677   Gx  8 50.0   +19  00  r  Cnc               15.  p eF,  vS,  rr  (vS  Cl)
I2415  ***  8 50.0   +18  39  x  Cnc                F, vS,  E 65deg  ,  FN
 2678    -  8 50.2   +11  20  r  Cnc                Cl,  vlC,  P
 2646   Gx  8 50.4   +73  28  s  Cam    1.7   12.0   vF,  S,  2 F st  2'.5  sf
 2682   OC  8 50.4   +11  49  s  Cnc   30.     6.9   !  Cl,  vB,  vL,  eRi,  lC,  st  10...15;  = M67
I2416  D*   8 50.5   +18  34  x  Cnc                pB,  S,  R
I2417  Gx   8 51.2   +18  48  x  Cnc                B,  S,  R,  stell  N
I2418  Gx   8 51.4   +17  57  x  Cnc                vF,  pL,  R,  2nd  vnr  sf
 2676   Gx  8 51.5   +47  33  s  UMa    1.5   14.  p eeF,  pS,  R,  4 pB  st  nf
 2679   Gx  8 51.5   +30  52  r  Cnc               14.  p pF,  pS,  R,  bM,  D  with  2680
 2680   Gx  8 51.5   +30  52  r  Cnc               14.  p vF,  vS,  R,  bM,  D  with  2679
I2420  Gx   8 51.5   +03  05  z  Hya               15.  p F,  S,  gbMN
 2675   Gx  8 51.9   +53  36  r  UMa               14.  p vF,  R,  *15  p  12s
I2419    *  8 52.2   +18  06  x  Cnc                F, pS,  E 0deg  ,  dif
 2683   Gx  8 52.7   +33  25  s  Lyn    9.3    9.7   vB,  vL,  vmE  39deg  ,  gmbM
 2690   Gx  8 52.7   -02  37  r  Hya               14.  p pF,  S,  E
I 523  Gx   8 53.2   +09  09  u  Cnc    1.4   15.  p F,  S,  R,  dif
 2681   Gx  8 53.5   +51  19  s  UMa    3.8   10.3   vB,  vL,  vg,  vsmbM  *10
 2714   Gx  8 53.5   -59  13  t  Car                eF,  S,  R,  pslbM
I 520  Gx   8 53.7   +73  29  s  Cam    2.3   13.  p pB,  pL,  bM,  *  nr
 2696    -  8 54.4   -04  59  r  Hya                eF,  vS,  stellar
I2421  Gx   8 54.4   +32  41  v  Cnc    2.6           vF,  pS,  dif,  diffic
I2422  Gx   8 54.4   +20  14  m  Cnc    0.4   16.  p pF,  S,  R,  dif,  *14  close
 2695   Gx  8 54.5   -03  05  r  Hya               13.  p pF,  cS,  R
I 522  Gx   8 54.5   +57  10  u  UMa    1.0   14.  p pF,  pS,  R,  bM  (2 eF  st  inv?)
 2684   Gx  8 54.8   +49  08  r  UMa               13.  p F,  pL,  R,  gbM,  4 S st  nr
 2691   Gx  8 54.8   +39  32  s  Lyn    1.6   14.  p pF,  vS,  mbM
I2423  Gx   8 54.8   +20  14  u  Cnc    1.1   15.  p F,  S,  R,  dif
 2686   Gx  8 54.9   +49  08  r  UMa               16.  p vF,  vS,  D or  *  close  f
 2687   Gx  8 55.0   +49  09  r  UMa               17.  p vS
 2697   Gx  8 55.1   -03  00  r  Hya               13.  p vF,  vS,  R
 2689   Gx  8 55.2   +49  09  r  UMa                vvF,  S
 2688   Gx  8 55.3   +49  06  r  UMa               16.  p vvF,  S
 2653  Ast  8 55.6   +78  25  r  Cam                vF,  vS,  F*  close  n,  2655  s
 2655   Gx  8 55.6   +78  13  s  Cam    5.1    10.1   vB,  cL,  lE  90deg  ,  gsvmbM
 2685   Gx  8 55.6   +58  44  s  UMa    5.2    11.1   pF,  R,  F*  in  centre
 2698   Gx  8 55.6   -03  11  s  Hya    1.8   13.  p vF,  pS,  R,  *9  np  4'
 2700    -  8 55.7   -05  06  r  Hya                eF,  vS,  1'  n  of  2699
I2425    *  8 55.8   -03  24  F  Hya                eF,  neb?
 2699   Gx  8 55.9   -03  09  r  Hya               13.  p vF,  S,  R,  *15  np
 2702    *  8 55.9   -03  03  F  Hya                vF,  vS,  4'  nf  2699
 2703  D*   8 55.9   -03  17  F  Hya                eF,  lE,  doubtful
 2705    *  8 56.0   -03  00  F  Hya                vF,  vS,  3 st  14  f,  nf
 2708   Gx  8 56.1   -03  22  s  Hya    3.0   14.  p pF,  pS,  E,  2 st  nr
 2707    *  8 56.2   -03  04  F  Hya                eF,  S
 2706   Gx  8 56.3   -02  35  r  Hya               14.  p vF,  pS,  mE,  *  nr  f
 2709   Gx  8 56.3   -03  16  r  Hya               15.  p vF,  pS,  lE,  nnf  2708
I2424       8 56.8   +39  23  x  Lyn                vF,  S,  lbM;  = 2704
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 2704   Gx   8 56.9   +39  22  r  Lyn          14.  p vF,  vS;  = IC 2424?
 2692   Gx   8 57.0   +52  04  s  UMa   1.5    14.  p vF,  S,  R,  psbM
 2693   Gx   8 57.0   +51  21  s  UMa   2.2    11.7   pB,  lE,  psmbM
 2694   Gx   8 57.0   +51  20  v  UMa   0.3    14.3   vF,  vS,  1's  of  2693
 2717   Gx   8 57.0   -24  40  r  Pyx          14.  p pF,  S,  R,  vgpmbM
 2711   Gx   8 57.3   +17  17  r  Cnc          14.  p vF,  S,  R
 2713   Gx   8 57.3   +02  55  s  Hya   3.9    11.7   pB,  iR,  mbM
 2716   Gx   8 57.6   +03  05  s  Hya   1.8    12.4   F,  S,  R,  mbM
I 524         8 58.2   -19  11  d  Hya                vF,  vS,  R,  vF  N?
I2426  Gx   8 58.5   +02  54  m  Hya   0.3    15.  p F,  vS,  R,  stell
 2722   Gx   8 58.8   -03  43  v  Hya                vF,  vS,  stellar
 2718   Gx   8 58.9   +06  18  s  Hya   2.5    13.  p F,  pL,  E,  am  3  st
 2721   Gx   8 58.9   -04  46  s  Hya   2.6    13.  p cF,  pL,  R,  vgbM
 2701   Gx   8 59.1   +53  46  s  UMa   2.1    12.4   pB,  fan-  shaped,  *11  att
 2720   Gx   8 59.2   +11  10  r  Cnc          14.  p F,  S,  R,  bM
 2712   Gx   8 59.5   +44  55  s  Lyn   2.9    12.0   pB,  L,  E,  vgbM  *18
 2710   Gx   8 59.8   +55  41  r  UMa          14.  p vF,  S
 2723   Gx   9 00.2   +03  11  s  Hya   1.3    15.  p F,  S,  R
 2719   Gx   9 00.3   +35  44  s  Lyn   1.3    14.  p vF,  S,  E  110deg  ,  2  vF  st  inv
 2736   Gx   9 00.4   -45  54  r  Vel                ! eeF,  vL,  vvmE  19deg
 2724   Gx   9 01.0   +35  46  r  Lyn          15.  p eF,  S,  stellar
I2427   Gx   9 01.0   +37  52  z  Lyn          16.  p F,  vS,  R,  bM
 2725   Gx   9 01.1   +11  05  r  Cnc          14.  p F,  pL,  p  of  2
 2727    -   9 01.1   -03  23  r  Hya                vF,  L,  R,  bM
I 525   Gx   9 01.3   -01  52  u  Hya   1.0    15.  p F,  S,  E  ns
 2729   Gx   9 01.5   +03  43  r  Hya          14.  p vF,  vS,  R
 2728   Gx   9 01.8   +11  04  r  Cnc          15.  p vF,  pL,  lE,  f  of  2
 2731   Gx   9 02.1   +08  18  r  Cnc          14.  p F,  vS,  R
 2733    -   9 02.1   -03  44  r  Hya                eF,  R
 2730   Gx   9 02.3   +16  50  r  Cnc          13.  p vF,  L,  R
 2735   Gx   9 02.6   +25  56  s  Cnc   1.2    14.  p S*  inv  in  vF,  vS  neb,  E  pf
I 526   Gx   9 02.6   +10  50  m  Cnc   0.7    15.  p F,  S,  R
 2734   Gx   9 03.0   +16  50  r  Cnc                eF,  vS,  R
I2428   Gx   9 03.2   +30  35  u  Cnc   1.9    15.  p F,  pS,  E  pf,  glbM
I2429   Gx   9 03.8   +29  18  m  Cnc   0.4    15.  p F,  vS,  R,  bMN
 2737   Gx   9 03.9   +21  54  r  Cnc          15.  p vF,  vS,  D  with  2738
 2738   Gx   9 03.9   +21  58  r  Cnc          14.  p pB,  S,  iF,  D  with  2737
I 512   Gx   9 04.    +85  30  s  Cam   3.6    12.  p F,  S,  R,  gbM
 2741    -   9 04.3   +18  16  r  Cnc                vF,  p  of  2
I2430   Gx   9 04.5   +27  57  u  Cnc   1.1    14.  p F,  S,  R,  gbM,  r
I2431   Gx   9 04.5   +14  36  u  Cnc   0.6    14.  p F,  S,  R,  N,  r
 2745   Gx   9 04.6   +18  15  r  Cnc          15.  p eF,  vS,  stell,  f  of  2
I2432   Gx   9 04.6   +05  31  z  Hya          15.  p F,  vS,  R,  dif
 2744   Gx   9 04.7   +18  28  s  Cnc   1.8    13.4   vF,  S,  R,  r,  D*  nr
 2726   Gx   9 04.9   +59  56  s  UMa   1.5    13.  p cF,  pS,  iR,  er
 2743   Gx   9 05.0   +25  00  r  Cnc          14.  p eF,  S,  R,  vlbM
 2754   Gx   9 05.0   -19  05  r  Hya                eF,  S,  R,  1st  of  3
 2747   Gx   9 05.3   +18  26  r  Cnc          15.  p vF,  vS,  stellar
 2749   Gx   9 05.4   +18  19  s  Cnc   2.0    12.0   pF,  S,  R,  bMN  =  *15
 2758   Gx   9 05.4   -19  03  r  Hya          14.  p eF,  S,  E  0deg  ,  3rd  of  3
I2436   D*   9 05.4   -19  10  F  Hya                eF,  S,  stell,  susp
 2751   Gx   9 05.5   +18  15  r  Cnc          15.  p eF,  eS,  stellar
 2757   D*   9 05.5   -19  02  F  Hya                eF,  2nd  of  3;  only  a  D*,  dist  12"
I2433   Gx   9 05.5   +22  37  m  Cnc   0.8    15.  p F,  lE  pf,  dif
I2437   Gx   9 05.5   -19  12  c  Hya   2.4          F,  vS,  R,  10'  s  of  2754,  57,  58
 2750   Gx   9 05.7   +25  26  s  Cnc   2.3    12.  p vF,  cL,  R,  bMN,  2  c  st  p
 2752   Gx   9 05.7   +18  20  s  Cnc   2.0    15.  p pF,  pL,  vmE,  gbM
 2739   Gx   9 06.0   +51  45  r  UMa          15.  p vF,  S,  R,  np  2740
 2746   Gx   9 06.0   +35  22  r  Lyn          14.  p eF,  S,  R,  vglbM,  *12  nnp  50"
 2740   Gx   9 06.1   +51  44  r  UMa          15.  p vF,  pS,  R
 2763   Gx   9 06.8   -15  30  s  Hya   2.3    12.1   vF,  pS,  bM,  S*  30"  n
I2435   Gx   9 06.8   +26  16  u  Cnc   1.0    15.  p F,  S,  R,  gbM,  r
I2448   Pl   9 07.1   -69  57  s  Car   0.1    12.  p PN  ,  stell
 2753   Gx   9 07.2   +25  20  r  Cnc          15.  p vF,  vS,  *14  np  40"
I2434   Gx   9 07.2   +37  12  u  Lyn   1.9    14.  p F,  pS,  lbN,  r
 2761   Gx   9 07.5   +18  26  r  Cnc          15.  p vF,  S
 2742   Gx   9 07.6   +60  29  s  UMa   3.1    11.7   cB,  cL,  E  90deg  ,  er
 2765   Gx   9 07.6   +03  23  s  Hya   2.3    13.  p vF,  pL,  E,  gbM,  er
 2772   Gx   9 07.7   -23  37  r  Pyx          15.  p eF,  lE,  lbM
 2755   Gx   9 07.9   +41  43  r  Lyn          14.  p vF,  S,  iF,  lbM,  r
 2715   Gx   9 08.1   +78  05  s  Cam   5.0    11.4   pB,  L,  E
 2764   Gx   9 08.3   +21  27  s  Cnc   1.7    12.7   cF,  vS,  R,  er,  bet  2  pB  st
 2759   Gx   9 08.6   +37  37  r  Lyn          14.  p vF,  cS,  R
I2439   Gx   9 08.6   +32  35  z  Cnc          15.  p F,  S,  dif,  r
 2766   Gx   9 08.8   +29  52  r  Cnc          14.  p vF,  vS,  iF,  bM
 2756   Gx   9 09.0   +53  51  s  UMa   1.9    13.  p pB,  pS,  E,  vgbM
 2788   Gx   9 09.0   -67  56  v  Car                vF,  vS,  mE  105deg
I 528   Gx   9 09.4   +15  48  u  Cnc   1.7    15.  p pB,  vS,  R,  N  =  13m
 2770   Gx   9 09.6   +33  07  s  Lyn   3.7    12.  p F,  L,  mE  150deg  ,  r,  2  st  n
 2773   Gx   9 09.6   +07  11  r  Cnc          14.  p vF,  S,  lE
I 527   Gx   9 09.6   +37  35  u  Lyn   1.9    15.  p eeF,  pL,  R,  e  diffic
 2762   Gx   9 09.8   +50  26  r  UMa          15.  p vvF,  S,  R,  1st  of  4
I2441         9 10.0   +22  52  d  Cnc                F,  S,  R,  glbM,  D?
 2767   Gx   9 10.1   +50  25  r  UMa          14.  p vF,  sbM  *15,  2nd  of  4
I2442         9 10.1   +22  51  d  Cnc                vF,  vS,  R,  vlbM
 2775   Gx   9 10.3   +07  02  s  Cnc   4.5    10.3   cB,  cL,  R,  vgvsmbM,  r
 2769   Gx   9 10.4   +50  27  r  UMa          14.  p pF,  S,  E,  pslbM,  3rd  of  4
 2771   Gx   9 10.5   +50  24  r  UMa          14.  p vF,  S,  lE,  4th  of  4
 2774   Gx   9 10.6   +18  42  r  Cnc          15.  p vF,  S,  R,  am  5  S  st
 2777   Gx   9 10.7   +07  12  s  Cnc   1.0    14.  p F,  S
 2781   Gx   9 11.5   -14  49  s  Hya   3.9    11.5   B,  S,  vlE,  psmbM
I2443   Gx   9 11.5   +28  49  m  Cnc   0.6    15.  p F,  S,  R,  gbMN
 2768   Gx   9 11.6   +60  02  s  UMa   6.3    10.0   cB,  cL,  lE,  psbMLBN
 2808   Gb   9 12.0   -64  52  s  Car   13.8     6.3   ! glob.  cl.  ,  vL,  eRi,  vgeCM,  45s   d,  st
   13...15
 2776   Gx   9 12.2   +44  57  s  Lyn   2.9    11.6   pB,  L,  R,  vgbM,  r
 2778   Gx   9 12.3   +35  01  s  Lyn   1.5    13.  p pB,  S,  R,  psmbM
 2779   Gx   9 12.3   +35  03  r  Lyn          15.  p eF,  vS,  92"  nf  2778
 2784   Gx   9 12.3   -24  10  s  Hya   5.1    10.1   B,  L,  mE  64deg  ,  gmbM
 2792   Pl   9 12.4   -42  26  s  Vel   0.2    14.  p !  PN  ,  pB  =  *9,  vS,  R,  am  st
 2780   Gx   9 12.7   +34  55  s  Lyn   1.0    14.  p vF,  S,  R,  S  D*  p
I2444   Gx   9 12.8   +30  14  m  Cnc   0.9    15.  p F,  vS,  R,  stell
I2445   Gx   9 13.2   +31  48  u  Cnc   1.0    15.  p F,  S,  R,  dif,  r
 2732   Gx   9 13.4   +79  11  s  Cam   2.3    11.9   pB,  S,  E  45deg  ,  *13  nf
I2446   Gx   9 13.5   +28  58  u  Cnc   1.7    15.  p F,  S,  E  130deg  ,  bMN,  r
I2447         9 13.5   +28  45  d  Cnc                F,  S,  R,  gbMN
 2783   Gx   9 13.6   +29  59  r  Cnc          14.  p vF,  vS,  R,  2  pB  st  sp
 2748   Gx   9 13.7   +76  29  s  Cam   3.1    11.7   pB,  pL,  E,  vglbM
 2836   Gx   9 13.7   -69  20  v  Car                F,  pS,  R,  glbM
 2786    -   9 14.0   +12  09  r  Cnc                vF,  vS,  mbM
 2822   Gx   9 14.0   -69  38  s  Car   2.1    12.  p pF,  vS,  R,  glbM
I2438   OC   9 14.0   +73  26  x  Cam                Cl,  5  or  6  st  13...  within  1'.5
 2782   Gx   9 14.1   +40  07  s  Lyn   3.8    11.5   cB,  R,  mbMBN
 2789   Gx   9 15.0   +29  44  r  Cnc          14.  p pF,  S,  R,  gbM
 2790   Gx   9 15.0   +19  43  r  Cnc          14.  p vF,  S,  R,  lbM
 2791   Gx   9 15.0   +17  36  r  Cnc          15.  p F,  R
 2785   Gx   9 15.2   +40  55  r  Lyn          15.  p eF,  pS,  iE,  sev  eF  st  inv
I2449         9 15.2   +30  00  d  Cnc                vF,  vS,  lbM
I 530   Gx   9 15.3   +11  53  u  Cnc   2.1    14.  p pB,  S,  E  pf
I2440         9 15.5   +73  28  d  Cam                vF,  stell  (13m),  neb?
 2842   Gx   9 15.6   -63  04  t  Car                F,  vS,  bet  2  st
 2760    -   9 15.7   +76  23  r  Cam                vF,  S,  R,  nearly  bet  *8  &  *9
I2450         9 15.7   +25  27  d  Cnc                F,  S,  gbM,  r
I2451   Gx   9 15.7   +23  29  z  Cnc          16.  p F,  S,  R,  gbMN
I2453   Gx   9 15.8   +20  56  z  Cnc          15.  p F,  S,  R,  gbM,  r
I2452   Gx   9 15.9   +23  27  z  Cnc          16.  p F,  S,  R,  gbMN
 2794   Gx   9 16.0   +17  36  r  Cnc          14.  p eF,  vS,  sp  of  2
 2818   OC   9 16.0   -36  37  s  Pyx   9.      8.2   ! glob.  cl.  ,  pB,  pL,  R,  vglbM,  in  L  Cl
I2454   Gx   9 16.0   +17  49  u  Cnc   1.2    14.  p F,  vS,  gbMN
 2795   Gx   9 16.1   +17  38  r  Cnc          14.  p eF,  vS,  nf  of  2
 2811   Gx   9 16.2   -16  19  s  Hya   2.7    11.3   pB,  pS,  E,  psmbM
 2815   Gx   9 16.3   -23  38  s  Hya   3.5    13.  p F,  S,  lE,  gbM
 2797   Gx   9 16.4   +17  44  r  Cnc          14.  p eF,  sev  st  nr
 2796   Gx   9 16.7   +30  55  r  Cnc          14.  p eF,  S,  R,  lbM
 2801   Gx   9 16.7   +19  56  r  Cnc          15.  p eF,  pL
 2802   Gx   9 16.7   +18  58  r  Cnc          14.  p vF,  S,  R,  r,  np  of  2
 2803   Gx   9 16.7   +18  58  r  Cnc          14.  p vF,  S,  R,  r,  sf  of  2
 2793   Gx   9 16.8   +34  26  s  Lyn   1.3    14.  p vF,  S,  R,  D*  p  5s  ,  n  5'
 2804   Gx   9 16.8   +20  12  r  Cnc          14.  p vF,  S,  R
 2821   Gx   9 16.8   -26  49  r  Pyx          14.  p eF,  *11  att
I2455         9 16.8   +20  07  d  Cnc                F,  R,  gbMN,  r
 2806   Gx   9 17.0   +20  03  r  Cnc          15.  p vF,  stellar,  p  2809
 2807   Gx   9 17.0   +20  02  r  Cnc          15.  p vF,  vS,  2809  f  7s  ,  n  2'
 2809   Gx   9 17.1   +20  04  r  Cnc          14.  p vF,  S,  R
I2457   Gx   9 17.1   +20  05  m  Cnc   1.2    14.  p F,  S,  R,  dif
 2817   Gx   9 17.3   -04  44  r  Hya          13.  p vF,  pS,  R
 2798   Gx   9 17.4   +42  00  s  Lyn   2.8    12.3   pB,  S,  stellar
 2799   Gx   9 17.5   +42  00  s  Lyn   1.9    14.  p F,  cL,  vmE,  f  2798
I2456         9 17.5   +34  47  d  Lyn                F,  S,  dif,  r
 2812   Gx   9 17.6   +19  55  r  Cnc          15.  p eF
 2813   Gx   9 17.7   +19  54  r  Cnc          15.  p F
 2835   Gx   9 17.9   -22  21  s  Hya   6.3    11.  p F,  *10  inv  f,  bet  2  st  9
I 531   Gx   9 17.9   -00  17  u  Hya   1.8    15.  p F,  vS,  E  pf,  lbM
 2819   Gx   9 18.2   +16  13  r  Cnc          14.  p pB,  vS,  R
 2837   Gx   9 18.4   -16  30  h  Hya   0.3    14.  p eF,  R,  bM,  *  f  8s  .5
I 529   Gx   9 18.5   +73  46  s  Cam   3.7    13.  p pF,  pL,  E
 2800   Gx   9 18.6   +52  31  r  UMa          14.  p vF,  S,  lE,  *  att,  *  inv
 2845   Gx   9 18.6   -38  00  r  Vel                vF,  S,  R,  *12  att  sf
 2824   Gx   9 19.0   +26  16  s  Cnc   1.3    14.  p Cl,  S,  st  F,  vC
I 532    ?   9 19.0   -16  46  x  Hya                pB,  pL,  E  pf,  bM
I2459         9 19.1   +34  53  d  Lyn                eF,  vS,  diffic
 2827   Gx   9 19.2   +33  52  r  Lyn          15.  p vF,  vS,  R,  1st  of  3
 2787   Gx   9 19.3   +69  12  s  UMa   3.4    10.8   B,  pL,  lE  90deg  ,  mbM,  r,  vS*  sf  inv
 2823   Gx   9 19.3   +34  00  s  Lyn   1.0    16.  p vF,  S,  R
 2849   OC   9 19.3   -40  31  r  Vel                eF,  cL,  R,  vglbM,  rr
I2460    ?   9 19.3   +33  51  x  Lyn                F,  vS,  E  pf,  stell  N
 2825   Gx   9 19.4   +33  44  s  Lyn   1.1    16.  p F,  pS,  lE,  bM
 2826   Gx   9 19.4   +33  37  s  Lyn   1.8    15.  p vF,  vS,  R,  2825  n  7'
 2828   Gx   9 19.5   +33  53  r  Lyn          15.  p vF,  vS,  R,  2nd  of  3
 2829   Gx   9 19.5   +33  40  r  Lyn                eF,  vS,  R,  nf  2826
 2830   Gx   9 19.7   +33  44  A  Lyn   1.3    15.  p F,  S,  lE,  bM,  1st  of  3
 2831   Gx   9 19.7   +33  44  A  Lyn   0.8    13.6   F,  vS,  R,  2nd  of  3
 2832   Gx   9 19.8   +33  44  A  Lyn   3.3    11.5   cB,  cL,  E,  3rd  of  3
 2833   Gx   9 19.9   +33  56  r  Lyn          15.  p F,  pS,  R,  3rd  of  3  in  line
 2846         9 19.9   -14  41  D  Hya                vS  Cl  (neb?),  *10  sf  4'
I2461   Gx   9 19.9   +37  10  u  Lyn   2.7    15.  p F,  vS,  vlbM
 2834   Gx   9 20.0   +33  43  r  Lyn          15.  p vF,  S,  R,  bM
 2847   Gx   9 20.1   -16  31  h  Hya   0.4    15.  p vF,  S,  inv  in  2848,  np
 2848   Gx   9 20.2   -16  32  s  Hya   2.7    12.1   vF,  cL,  E  45deg  ,  glbM,  *11  nf  3'
 2805   Gx   9 20.3   +64  06  s  UMa   6.3    11.3   vF,  L,  R,  mbM
 2843   Gx   9 20.4   +18  57  r  Cnc                S*  and  neb
I 533         9 20.4   -04  00  d  Hya                eF,  S,  dif
 2839   Gx   9 20.6   +33  40  r  Lyn          15.  p vF,  S,  R
 2851   Gx   9 20.6   -16  28  r  Hya          15.  p eF,  pS,  mE,  f  2848
 2838   Gx   9 20.7   +39  19  r  Lyn          14.  p vF,  vS,  R
 2840   Gx   9 20.8   +35  23  r  Lyn          15.  p cF,  S,  R,  *10  np  2'
 2850   Gx   9 21.0   -04  55  r  Hya                vF,  vS,  R,  mbM
 2816    -   9 21.1   +60  27  r  UMa                F,  pmE
 2814   Gx   9 21.2   +64  15  s  UMa   1.4    13.8   F,  S,  iF,  1st  of  2
I 534   Gx   9 21.2   +03  09  u  Hya   1.9    15.  p vF,  S,  dif
 2867   Pl   9 21.4   -58  19  s  Car   0.2    10.  p !!  PN  =  *8,  vS,  R,  *15,  59deg  ,  13"
 2855   Gx   9 21.5   -11  55  s  Hya   2.7    11.6   pB,  pL,  R,  gmbMN
I2458   Gx   9 21.6   +64  14  s  UMa   0.4    15.  p eF,  S,  dif  close  to  2820
 2820   Gx   9 21.8   +64  16  s  UMa   4.3    12.8   F,  S,  E,  2nd  of  2
 2844   Gx   9 21.8   +40  09  s  Lyn   1.9    12.9   cF,  cS
 2841   Gx   9 22.0   +50  58  s  UMa   8.1     9.3   vB,  L,  vmE  151deg  ,  vsmbM  =  *10
 2866    -   9 22.0   -51  05  r  Vel                Cl,  lC
 2810   Gx   9 22.1   +71  50  s  UMa   2.0    13.  p F,  cS,  bM
I 535   Gx   9 22.2   -01  03  z  Hya          16.  p F,  vS,  R
 2858   Gx   9 22.9   +03  09  r  Hya          14.  p vF,  S,  mbM
I2462         9 22.9   +22  41  d  Leo                vF,  S,  dif,  r
I2463   Gx   9 23.0   +22  37  z  Leo          16.  p F,  S,  R,  gbM,  r
I2469   Gx   9 23.0   -32  27  c  Pyx   5.1          pF,  cS,  mE,  *10  sp  nr
 2852   Gx   9 23.2   +40  10  s  Lyn   1.2    14.  p vF,  cS,  R,  *10  p  2',  1st  of  2
 2853   Gx   9 23.3   +40  12  s  Lyn   2.0    14.  p vF,  S,  vgbM,  2nd  of  2
 2887   Gx   9 23.3   -63  49  t  Car                F,  S,  R,  pmbM,  B*  nr
 2868         9 23.4   -10  25  D  Hya                eF,  S,  R,  10s   p  2869
I2464   Gx   9 23.4   +22  35  m  Leo   0.6    15.  p pF,  S,  R,  gbM,  r
 2865   Gx   9 23.5   -23  10  s  Hya   2.0    11.4   B,  S,  R,  gbM
 2861   Gx   9 23.6   +02  08  r  Hya          14.  p pF,  S,  iR,  *14  f
 2863   Gx   9 23.6   -10  24  r  Hya          13.  p cF,  S,  E,  bet  2  st  12,  16
 2869         9 23.6   -10  26  D  Hya                eF,  pS,  E  170deg  ,  gbM,  bet  2  F  st;  =  2863
I2465         9 23.6   +24  27  d  Leo                F,  S,  dif
I2466   Gx   9 23.7   +24  31  z  Leo          15.  p vF,  vS,  dif,  *13.5  att
 2854   Gx   9 24.0   +49  13  r  UMa          14.  p cF,  cS,  vlE,  pglbM
 2856   Gx   9 24.2   +49  15  r  UMa          14.  p cF,  cS,  lE,  bM
 2864   Gx   9 24.2   +05  57  r  Hya          15.  p vF,  pL,  lE
 2859   Gx   9 24.3   +34  31  s  LMi   4.8    10.7   vB,  pL,  R,  smbM
 2857   Gx   9 24.5   +49  21  s  UMa   2.4    14.  p vF,  pL,  4  st  p
I 536   Gx   9 24.6   +25  07  u  Leo   1.2    15.  p F,  S,  R,  lbM
 2860   Gx   9 24.9   +41  04  r  Lyn          15.  p vF,  vS,  R,  gbM
 2862   Gx   9 24.9   +26  46  r  Leo          14.  p F,  S,  E,  bM
I2467         9 24.9   +38  20  d  LMi                F,  vS,  R,  gbMN
I2468         9 25.0   +38  20  d  LMi                vS,  R,  sbM  *15
I2470         9 25.0   +03  23  d  Hya                F,  pS,  iF,  E  135deg  ,  r
 2876   Gx   9 25.2   -06  43  r  Hya          14.  p F,  S,  sev  vF  st  inv
 2883   Gx   9 25.2   -34  05  v  Pyx                vF,  S,  vglbM,  rrr,  st  15
I2471   Gx   9 25.2   -06  50  m  Hya   0.7    14.  p vF,  2  or  3  st  in  neb;  =  2876?
 2879  ***   9 25.4   -11  40  F  Hya                vF,  vS,  R,  lbM
I 537   Gx   9 25.4   -12  23  m  Hya   1.0    14.  p neb  *14
 2871         9 25.7   +11  27  D  Leo                eF,  2872  sf  1'
 2872   Gx   9 25.7   +11  26  s  Leo   2.1    13.  p pF,  pS,  R,  bM
 2874   Gx   9 25.8   +11  26  s  Leo   2.5    14.  p vF,  pL,  mE
 2875   Gx   9 25.8   +11  26  h  Leo   0.5    15.  p eF,  nf  2874
 2877   Gx   9 25.8   +02  13  r  Hya          14.  p vF,  S,  vlE
 2878   Gx   9 25.8   +02  05  r  Hya          15.  p vF,  S,  vlE
 2873   Gx   9 25.9   +11  27  r  Leo          15.  p vF,  vS,  R,  n  of  E  neb
 2881   Gx   9 25.9   -11  59  r  Hya          14.  p eF,  pS,  2  st  9.5  &  10.5  sf
 2915   Gx   9 26.2   -76  38  s  Cha   1.5    12.6   pF,  pL,  R,  gbM
 2888   Gx   9 26.3   -28  02  s  Pyx   0.8    12.5   cF,  S,  R,  gmbM
 2884   Gx   9 26.4   -11  33  s  Hya   2.6    13.  p F,  S,  r?
 2882   Gx   9 26.5   +07  56  r  Leo          13.  p F,  pL,  E
 2886  ***   9 26.5   -21  46  F  Hya                eeF,  pL
I2472   Gx   9 26.5   +21  23  z  Leo          15.  p F,  S,  R,  dif
 2890   Gx   9 26.6   -14  32  r  Hya          15.  p eF,  S,  R,  bMN
 2891   Gx   9 26.8   -24  49  r  Pyx          14.  p F,  S,  R,  bM
I2484         9 26.8   -42  51  d  Vel                pB,  S,  R,  *7  nf,  D*  p
 2899   Pl   9 27.0   -56  06  s  Vel   2.0          F,  pL,  R,  gmbM,  am  80  st
I2482   Gx   9 27.0   -12  06  m  Hya   2.0    13.  p F,  vS,  *10  p  7s  ,  0'.8  n
 2889   Gx   9 27.2   -11  38  s  Hya   2.0    11.8   pF,  pS,  vlE,  vglbM,  r
I2474         9 27.2   +23  02  d  Leo                *13  in  vS  neb,  IC  538  f
I2485         9 27.2   -39  17  d  Ant                eF,  vS,  R,  st  in  neb,  susp
I 538   Gx   9 27.4   +23  01  m  Leo   0.5          *13  in  vF  neb;  =  2885?
I2473   Gx   9 27.4   +30  26  u  Leo   1.6    15.  p F,  pS,  R,  glbM
I2481   Gx   9 27.4   +03  56  u  Hya   0.9    14.  p F,  S,  E  150deg  ,  gbM,  r
I2488   OC   9 27.6   -56  59  s  Vel   15.     7.  p Cl,  co
 2870   Gx   9 27.8   +57  23  s  UMa   2.6    14.  p cF,  S,  E,  vglbM
I2475   Nb   9 27.9   +29  48  x  Leo   0.5          F,  vS,  R,  lbM
I2476   Gx   9 27.9   +29  59  v  Leo   1.7          F,  S,  R,  bM
I2477         9 27.9   +29  42  d  Leo                F,  S,  gbM,  r
I2478   Nb   9 27.9   +30  01  x  Leo   0.1          F,  S,  R,  N
I2479   Nb   9 28.1   +30  00  x  Leo   0.3          F,  S,  R,  vlbM
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I2480   Nb  9 28.2   +29  43 x  Leo    0.2          F, vS,  lE pf,  gbM,  r
I 539   Gx  9 29.1   -02  33 u  Hya    1.2  14.  p pB,  S,  R,  gbM,  r
 2894   Gx  9 29.4   +07  43 r  Leo         13.  p vF,  E,  er,  2 or 3 st inv
I2483   Gx  9 29.5   +31  00 z  Leo         16.  p F,  S,  R,  lbM
 2880   Gx  9 29.6   +62  30 s  UMa    2.6  11.6   B,  cS,  R,  mbM,  am  st
 2885   Gx  9 29.6   +22  57 r  Leo              eF,  vS,  E 90deg
 2897   Gx  9 29.8   +02  12 r  Hya              eF,  S
 2898   Gx  9 29.8   +02  03 r  Hya         15.  p vF,  vS,  lE
 2904   Gx  9 30.2   -30  23 r  Ant         13.  p F,  S,  lE,  psbM
I 540   Gx  9 30.2   +07  54 u  Leo    1.4  15.  p F,  S,  dif
I2487   Gx  9 30.2   +20  06 v  Leo    2.0          F,  L,  mE  160deg
 2893   Gx  9 30.3   +29  32 s  Leo    1.4  13.  p vF,  S,  R,  vsbM  *12
 2896   Gx  9 30.3   +23  39 r  Leo         15.  p F,  vS,  R,  *17  att
 2900   Gx  9 30.3   +04  08 r  Hya         14.  p eeF,  pL,  R
I2486   Gx  9 30.3   +26  39 u  Leo    1.1  15.  p vF,  cS,  dif
 2910   OC  9 30.4   -52  54 s  Vel    5.    7.2   Cl,  cL,  pRi,  pC,  st 10...14
I 541       9 30.5   -04  15 d  Hya              eeF,  pS,  R,  *10  s
 2902   Gx  9 30.9   -14  44 s  Hya    1.3  13.  p vF,  vS,  stellar;  = IC 543
I 543   Gx  9 30.9   -14  44 t  Hya    1.2  13.  p vF,  pL,  E,  dif
I 542   Gx  9 31.2   -13  10 m  Hya    1.0  15.  p F,  vS,  E pf,  lbM
I2489       9 31.2   -05  53 d  Hya              pF,  R
 2907   Gx  9 31.6   -16  44 s  Hya    1.9  13.  p pF,  S,  lE,  mb  sf
 2903   Gx  9 32.2   +21  30 s  Leo   12.6   8.9   cB,  vL,  E,  gmbM,  r,  sp  of  2
 2905   Gx  9 32.2   +21  31 u  Leo   13.3  10.  p vF,  cL,  R,  psbM,  r,  nf  of  2
 2906   Gx  9 32.2   +08  27 s  Leo    1.6  13.  p F,  pS,  lE,  gbM
 2895   Gx  9 32.4   +57  29 r  UMa         14.  p vF,  vS,  R,  vgbM,  D* 7' s
 2901    -  9 32.4   +31  07 r  Leo              no  description
 2892   Gx  9 32.9   +67  37 s  UMa    1.7  14.  p pF,  pS,  R,  lbM
I2490   Nb  9 33.1   +29  55 x  Leo    0.3          F,  S,  gbM
I2492       9 33.2   -37  54 d  Ant              cF,  vS,  R,  B* 1' np,  susp
 2912   Gx  9 33.7   +10  09 r  Leo              eF,  2911  sp
 2925   OC  9 33.7   -53  26 s  Vel   12.     8.  p Cl,  pRi,  pC,  D*  taken
 2911   Gx  9 33.8   +10  09 s  Leo    4.3  11.6   F,  pL,  R,  gbM,  p  of  2
 2913   Gx  9 34.0   +09  28 r  Leo         14.  p vF,  pL,  iR
 2914   Gx  9 34.0   +10  07 s  Leo    1.2  13.1   vF,  S,  R,  bMN,  f  of  2
 2920   Gx  9 34.3   -20  51 r  Hya              eF,  S,  R,  p  of  2
 2917   Gx  9 34.5   -02  30 r  Hya         14.  p pF,  S,  mbM
 2921   Gx  9 34.7   -20  57 r  Hya         13.  p vF,  pS,  lE,  vglbM,  f  of  2
 2919   Gx  9 34.8   +10  17 s  Leo    1.9  14.  p F,  pS
I 546   Gx  9 34.9   -16  23 m  Hya    0.6  14.  p F,  vS,  iF,  2924  f
 2916   Gx  9 35.0   +21  42 s  Leo    2.6  12.0   F,  S,  vlE
 2924   Gx  9 35.2   -16  24 s  Hya    1.6  13.  p pB,  S,  R
I2491   Gx  9 35.2   +34  44 u  LMi    1.1  15.  p F,  S,  R,  gbM,  r
 2932    -  9 35.3   -46  57 r  Vel              Cl,  eL,  vRi,  st  L  and  S
 2918   Gx  9 35.8   +31  42 r  Leo         13.  p vF,  cS,  R,  sbMN
I 544   Gx  9 35.9   +24  54 m  Leo    0.7  15.  p vF,  dif,  diffic
 2923   Gx  9 36.0   +16  45 r  Leo         15.  p vF
I 545   Gx  9 36.1   +24  57 m  Leo    0.4  15.  p F,  E pf,  F* f
I2494       9 36.1   -12  26 d  Hya              pB,  pL,  R,  2 st  nr  f
I 547   Gx  9 36.2   -12  25 m  Hya    1.2  13.  p pB,  S,  R,  lbM
I2493   Gx  9 36.3   +37  23 m  LMi    0.5  15.  p F,  vS,  stell
 2935   Gx  9 36.7   -21  08 s  Hya    3.5  12.  p pB,  pS,  vlE,  gmbM
 2922   Gx  9 36.8   +37  41 r  LMi         14.  p vF,  S,  iR,  lbM,  r
 2927   Gx  9 37.2   +23  35 r  Leo         14.  p F,  pL,  R,  lbM
 2928   Gx  9 37.3   +16  58 r  Leo         15.  p vF,  S,  R,  bM
 2929   Gx  9 37.4   +23  09 r  Leo         14.  p eF,  vS,  lE,  vlbM,  1st  of  3
 2926   Gx  9 37.5   +32  50 r  Leo         14.  p vF
 2930   Gx  9 37.5   +23  12 r  Leo         14.  p eF,  S,  2nd  of  3
 2931   Gx  9 37.6   +23  14 r  Leo         15.  p eF,  vS,  3rd  of  3
 2945   Gx  9 37.6   -22  02 r  Hya         14.  p F,  S,  R,  glbM,  2 or 3 S st nr
 2936   Gx  9 37.7   +02  44 s  Hya    1.7  13.1   vF,  iR
 2937   Gx  9 37.7   +02  44 s  Hya    1.0  13.6   F,  S,  like  a neb*
 2933   Gx  9 38.0   +17  01 r  Leo         15.  p F,  vS,  lE,  sp  of  2
 2934   Gx  9 38.0   +17  01 r  Leo         15.  p eF,  nf  of  2
 2973   Gx  9 38.0   -30  08 r  Ant              eF,  pS,  *8 f
 2939   Gx  9 38.1   +09  31 s  Leo    2.7  14.  p vF,  S,  vlE,  bM,  triangle  st  nf
 2940   Gx  9 38.1   +09  36 s  Leo    1.3  15.  p vF,  S,  5' n of 2939
I2495   Gx  9 38.2   +28  03 m  Leo    0.7  15.  p F,  cS,  R,  gbMN
 2938   Gx  9 38.3   +76  19 r  Dra         14.  p eF,  S,  iF,  D* f 3'
I 548   Gx  9 38.3   +09  26 z  Leo         15.  p F,  vS,  ibM,  2939  np
 2941   Gx  9 38.4   +17  03 r  Leo         15.  p eF,  vS,  lE,  p  of  2
 2947    -  9 38.4   -12  26 r  Hya              eF,  pL,  iR,  gbM
 2943   Gx  9 38.6   +17  02 r  Leo         14.  p F,  S,  iR,  bM,  f  of  2
I2504       9 38.6   -69  05 d  Car              eF,  vS,  eE  170deg  ,  lbM,  susp
I2496   Gx  9 38.7   +34  43 z  LMi         15.  p F,  vS,  R,  r
I2501   Pl  9 38.8   -60  05 s  Car    0.4  11.  p PN  , stell
 2948   Gx  9 38.9   +06  57 r  Leo         14.  p vF,  pL,  vgbM
 2942   Gx  9 39.1   +34  00 s  LMi    2.2  13.  p F,  pL,  vlE  0deg  ,  vglbM
 2946   Gx  9 39.1   +17  01 r  Leo         15.  p vF,  S,  E
 2944   Gx  9 39.3   +32  19 s  Leo    1.3  15.  p F,  vS,  lbM
 2952    -  9 39.3   -10  09 r  Hya              eF,  pS,  iR,  sbM,  *9.5  f 30s
 2956   Gx  9 39.3   -19  06 r  Hya              vF,  vS,  R,  *9.5  sf  4'
 2951   Gx  9 39.7   -00  14 r  Hya         15.  p pF,  S,  E
 2949   Gx  9 40.0   +16  47 r  Leo         15.  p vF,  double?
 2972   OC  9 40.3   -50  20 s  Vel    4.     9.9   Cl,  S,  lRi,  pC,  st  13
 2953    -  9 40.4   +14  50 r  Leo              eeF,  suspected
 2954   Gx  9 40.5   +14  55 r  Leo         13.  p vF,  S,  R,  n  of  2
I 550   Gx  9 40.5   -06  56 m  Hya    0.6  14.  p F,  eS,  stellar
 2958   Gx  9 40.6   +11  53 r  Leo         14.  p vF,  pS,  R,  vlbM
 2960   Gx  9 40.6   +03  34 r  Hya         13.  p vF,  R,  gbM
I 549       9 40.7   +03  59 d  Hya              vF,  S,  iF,  bM
I 553   Gx  9 40.7   -05  26 x  Hya              vF,  vS,  R,  dif
 2962   Gx  9 40.9   +05  10 s  Hya    3.3  11.7   F,  vS,  vlE,  psbM
I 551   Gx  9 40.9   +06  56 u  Leo    0.9  14.  p F,  vS,  R,  N = 13m
I2497       9 41.1   +34  42 d  LMi              vF,  vS,  R,  r
 2975   Gx  9 41.2   -16  39 r  Hya              eeF,  S,  R,  gbM
 2955   Gx  9 41.3   +35  53 s  LMi    1.8  12.7   cF,  pS,  iR,  glbM,  r
I 552   Gx  9 41.3   +10  38 u  Leo    1.1  14.  p F,  vS,  stell  N = 14m
I2498   Gx  9 41.3   +28  06 z  Leo         15.  p F,  S,  E ns,  r;  biN?
I2499       9 41.4   +27  54 d  Leo              F,  vS,  dif,  v  diffic
 2969   Gx  9 41.8   -08  37 r  Sex         13.  p vF,  pS,  iR,  vglbM
I 554       9 41.8   +12  26 d  Leo              eeF,  eS,  alm  stell
I 555   Gx  9 41.9   +12  17 u  Leo    1.3  14.  p pB,  vS,  R,  bM
 2967   Gx  9 42.1   +00  20 s  Sex    3.0  11.6   pF,  pL,  R,  vglbM
 2966   Gx  9 42.2   +04  40 r  Sex         14.  p vF*  in  vF,  lE  neb,  F*  p  30"
I2500    ?  9 42.3   +36  20 x  LMi              vF,  pS,  R,  mbM
 2982    -  9 42.4   -44  12 r  Vel              Cl,  P,  E,  st  10...11
 2950   Gx  9 42.6   +58  51 s  UMa    3.2  11.0   B,  pS,  R,  vgvmbMN
 2974   Gx  9 42.6   -03  42 s  Sex    3.4  10.8   B,  cS,  iR,  bM,  *9  sp  43"
 2964   Gx  9 42.9   +31  51 s  Leo    3.0  11.3   B,  vL,  lE,  vgbM,  sp  of  3
 2979   Gx  9 43.1   -10  23 r  Sex         14.  p pF,  pS,  vlE,  psbM
 2965   Gx  9 43.2   +36  14 r  LMi         14.  p eF,  vS,  R,  bM,  r
 2968   Gx  9 43.2   +31  56 s  Leo    2.2  11.8   pB,  pL,  lE,  vglbM,  2nd  of  3
 2980   Gx  9 43.2   -09  37 s  Sex    1.8  13.  p vF,  pS,  lE  0deg  ,  vglbM
I2502       9 43.2   +33  08 d  LMi              F,  S,  R,  gbM,  diffic
I2503       9 43.2   +33  11 d  LMi              vF,  vS,  dif,  v  diffic
 2978   Gx  9 43.3   -09  45 s  Sex    1.2  14.  p eF,  S,  R,  2980  n 10'
 2908   Gx  9 43.5   +79  41 r  Dra         14.  p eF,  vS
 2970   Gx  9 43.5   +31  59 s  Leo    1.0  14.  p F,  nf  of  3
 2984   Gx  9 43.6   +11  04 r  Leo         14.  p eF,  vS,  R,  bM;  =  IC  556
 2971   Gx  9 43.7   +36  10 r  LMi         15.  p eF,  pS,  iR,  vlbM
 2983   Gx  9 43.7   -20  29 s  Hya    2.6  11.7   F,  pS,  R,  bM,  r,  stellar
I 556   Gx  9 43.7   +11  04 u  Leo    0.9  14.  p F,  vS,  R,  N = 14m
 2977   Gx  9 43.8   +74  52 s  Dra    1.7  13.  p cB,  pL,  iF
 2909   Gx  9 44.0   +65  59 r  UMa         14.  p eF,  S,  psbM
 2995    -  9 44.1   -54  47 r  Vel              Cl,  P,  lC
I 557   Gx  9 44.1   +10  59 m  Leo    0.5  15.  p F,  vS,  R,  vlbM
 2986   Gx  9 44.3   -21  17 s  Hya    2.5  10.9   pB,  pS,  iR,  mbM
I2507   Gx  9 44.6   -31  47 c  Ant    1.7          vF,  S,  R,  *12.5  nr  nf,  *9  np
I 559   Gx  9 44.7   +09  37 m  Leo    0.8  15.  p F,  pS,  R,  dif
 2981   Gx  9 45.0   +31  06 r  Leo         15.  p vF
I 558   Gx  9 45.0   +29  27 m  Leo    0.9  15.  p F,  R,  bM
 2959   Gx  9 45.1   +68  36 s  UMa    1.5  14.  p F,  pL,  R,  vglbM,  st  n
I2505       9 45.1   +27  16 d  Leo              F,  S,  R,  vlbM
 2999    -  9 45.2   -50  26 r  Vel              Cl,  S,  lRi,  iF,  st  12...15
I2506       9 45.2   +27  15 d  Leo              F,  S,  R,  glbM,  r
 2961   Gx  9 45.4   +68  36 v  UMa    0.9          cF,  S,  lE,  nf  2959
 2989   Gx  9 45.4   -18  23 s  Hya    1.4  13.  p F,  R,  gbM,  D*  f
 2987   Gx  9 45.6   +04  56 r  Sex         14.  p eF,  S,  iF,  sev  vF  st  inv
 2997   Gx  9 45.6   -31  11 s  Ant    8.1  11.  p !  vF,  vL,  vgvsbMN  4",  19s  .5  d
 2992   Gx  9 45.7   -14  20 s  Hya    4.1  11.9   cF,  S,  R,  bM,  stellar,  p  of  2
 2993   Gx  9 45.8   -14  22 s  Hya    1.6  12.6   cF,  S,  R,  bM,  stellar,  f  of  2
I 560   Gx  9 45.9   -00  16 u  Sex    1.5  15.  p F,  S,  dif,  *10  near
I 561   Gx  9 46.0   +03  08 m  Sex    0.4  15.  p pF,  dif
I 562   Gx  9 46.1   -03  58 v  Sex    1.5          vF,  pL,  E ns,  gbM
 2990   Gx  9 46.3   +05  43 s  Sex    1.3  12.8   F,  pS,  lE  90deg
 3001   Gx  9 46.3   -30  26 s  Ant    3.1  13.  p F,  S,  R,  *12  att  320deg
I 563   Gx  9 46.3   +03  03 v  Sex    1.1          pB,  S,  dif,  gbM
I 564   Gx  9 46.4   +03  04 v  Sex    1.9          pB,  pL,  E pf
 2996   Gx  9 46.5   -21  36 r  Hya         14.  p vF,  S,  *9  f 1'
 2988   Gx  9 46.8   +22  01 r  Leo         14.  p eF,  p  2991
 2991   Gx  9 46.8   +22  01 r  Leo         14.  p F,  vS,  bM,  sp  of  2
I2509    *  9 46.9   +05  43 x  Sex              eF,  neb?
I2508   Gx  9 47.1   +33  30 z  LMi         16.  p F,  vS,  R,  dif,  r
 2994   Gx  9 47.2   +22  06 r  Leo         14.  p F,  S,  R,  bM,  nf  of  2
 2976   Gx  9 47.3   +67  55 s  UMa    4.9  10.2   B,  vL,  mE  152deg  ,  st  inv
 3007   Gx  9 47.6   -06  26 r  Sex         15.  p eF,  S,  iR,  lbM,  r
I2510   Gx  9 47.7   -32  50 c  Ant    1.5          eF,  vS,  cE  140deg  ,  bM,  susp
 2963   Gx  9 47.8   +72  58 s  Dra    1.4  14.  p vF,  vS,  R,  bM
I 565   Gx  9 47.8   +15  51 u  Leo    1.7  15.  p F,  S,  dif
 2957   Gx  9 47.9   +72  58 r  Dra         15.  p eF,  *13  nr
 3003   Gx  9 48.6   +33  25 s  LMi    5.9  11.7   !  cB,  L,  vmE  90deg
 2998   Gx  9 48.7   +44  05 s  UMa    3.0  13.  p pF,  pL,  E  51deg  ,  bMN,  r
 3029   Gx  9 48.7   -08  03 r  Sex              pF,  pS,  R
 3033   OC  9 48.8   -56  25 s  Vel    5.     8.8   Cl,  pL,  pRi,  iF,  st  11...12
 3002   Gx  9 49.0   +44  03 r  UMa         16.  p eeF,  vS
 3000   D*  9 49.1   +44  08 r  UMa              vF,  S,  iR,  r
 3017   Gx  9 49.1   -02  50 r  Sex         14.  p eF,  vS,  *11  np  3'
 3004   D*  9 49.2   +44  07 r  UMa              eF,  suspected
 3005   Gx  9 49.2   +44  08 r  UMa         16.  p vF,  pS,  E  nnp  ssf
 3014   Gx  9 49.2   -04  44 r  Sex         14.  p eF,  pL,  p  of  2
 3006   Gx  9 49.3   +44  01 r  UMa         15.  p vF,  S,  stellar
 3036   OC  9 49.3   -62  41 A  Car              Cl,  cL,  lC
 3015   Gx  9 49.4   +01  08 r  Sex         14.  p F,  vS,  alm  stellar
I2511   Gx  9 49.4   -32  51 c  Ant    3.1          pB,  pS,  eE,  *7  np,  np  of  2
I2512   Gx  9 49.4   -32  51 c  Ant    3.1          eeF,  pS,  mE,  bet  2 st,  sf  of  2;  =  IC  2511
 3025   Gx  9 49.5   -21  45 r  Hya         15.  p eF,  vS,  R,  *9  s
 3008   Gx  9 49.6   +44  05 r  UMa         15.  p pF,  S,  E,  *13- 14  p 1'
 3011   Gx  9 49.7   +32  13 s  Leo    1.2  14.  p eeF,  eS,  stellar
 3016   Gx  9 49.7   +12  42 r  Leo         13.  p vF,  S,  R,  p  of  2
 3018   Gx  9 49.7   +00  37 r  Sex         14.  p vF,  vS,  bM
 3012   Gx  9 49.8   +34  42 r  LMi         15.  p vF,  pL,  R,  com
 3022   Gx  9 49.8   -05  09 r  Sex         14.  p F,  R,  vglbM,  f  of  2
 3023   Gx  9 49.9   +00  37 s  Sex    3.1  13.  p pF,  pL,  iR,  lbM,  dif
 3028   Gx  9 49.9   -19  10 r  Hya              F,  S,  R,  lbM
 3019   Gx  9 50.0   +12  44 r  Leo         15.  p eF,  f  of  2
I 566   Gx  9 50.0   -00  14 z  Sex         15.  p vF,  vS,  R,  bM
I2513   Gx  9 50.0   -32  53 c  Ant    3.0          eeF,  eS,  R,  D*  nr  sf,  sp  of  2;  =  IC  2514
I2514   Gx  9 50.0   -32  53 c  Ant    3.0          eeF,  eS,  3 F st  nr  f,  nf  of  2
 3013   Gx  9 50.1   +33  34 r  LMi         15.  p pF,  pS,  R,  bM,  3021  f
 3020   Gx  9 50.1   +12  49 s  Leo    3.2  13.  p eF,  pS,  lE  0deg  ,  r
 3009   Gx  9 50.2   +44  18 r  UMa         14.  p pF,  R,  bM,  r,  p  of  2
 3030   Gx  9 50.2   -12  14 r  Hya         15.  p eF,  vS,  R,  bM
 3059   Gx  9 50.2   -73  55 s  Car    3.2  12.  p F,  L,  iR,  glbM,  S*  inv
 2985   Gx  9 50.4   +72  17 s  UMa    4.3  10.5   vB,  cL,  R,  psmbM,  *  inv  f
 3024   Gx  9 50.5   +12  46 s  Leo    2.2  14.  p eF,  pL,  E,  r
I 567       9 50.5   +12  49 d  Leo              vF,  suspected,  2'  from  3024
 3010   Gx  9 50.6   +44  20 r  UMa         14.  p F,  psbM,  rr,  f  of  2
 3026   Gx  9 50.9   +28  33 s  Leo    2.2  13.  p eeF,  pS,  lE,  v  diffic
 3021   Gx  9 51.0   +33  33 s  LMi    1.7  13.  p pB,  pS,  vlE,  mbM,  *10,  140deg
I 568   Gx  9 51.1   +15  44 u  Leo    1.5  15.  p F,  pL,  E pf,  gbM
 3038   Gx  9 51.3   -32  45 s  Ant    2.6  13.  p pB,  pS,  R
 3037   Gx  9 51.4   -27  02 r  Hya         14.  p F,  pS,  R,  lbM
I 569   Gx  9 51.5   +10  55 m  Leo    0.2  15.  p vF,  dif,  vlbM
 3035   Gx  9 51.8   -06  49 r  Sex         13.  p pF,  pL,  R,  sev  vF  st  inv
I 570   Gx  9 51.8   +15  46 z  Leo         16.  p pF,  S,  R,  gbM
 3032   Gx  9 52.1   +29  14 s  Leo    2.5  11.9   F,  S,  sbM  *12,  bet  2 B st
 3039   Gx  9 52.5   +02  09 s  Sex    1.3  14.  p vF,  S,  iR
I 571   Gx  9 52.5   +15  46 m  Leo    0.3  15.  p pB,  S,  R,  N = 12.5
I 572   Gx  9 52.5   +15  50 m  Leo    0.4  15.  p F,  S,  R,  gbM
I2517       9 52.7   -33  44 d  Ant              eeF,  S,  R,  susp
 3040   Gx  9 53.0   +19  26 r  Leo         14.  p vF,  vS,  bM,  r
 3041   Gx  9 53.1   +16  41 s  Leo    3.7  11.5   glob.  cl.  ,  F,  L,  R,  vglbM,  rr,  2  B  st  sp
 3045   Gx  9 53.2   -18  39 r  Hya         14.  p vF,  pS,  R,  lbM,  sp  of  2
 3046    *  9 53.3   -27  19 r  Ant              pF,  R,  sp  of  2
 3042   Gx  9 53.4   +00  42 r  Sex         14.  p pB,  S,  vlE,  gbM
 3058   Gx  9 53.5   -12  30 r  Hya         15.  p eF,  pL,  D or biN,  pos  210deg  ,  dist  20";  =
    IC  573
I 573   Gx  9 53.6   -12  31 m  Hya    1.2  15.  p eF,  vS,  R,  vS*  close
 3044   Gx  9 53.7   +01  35 s  Sex    4.8  12.0   vF,  vL,  vmE  122deg
 3051   Gx  9 53.8   -27  17 r  Ant         14.  p pF,  S,  R,  gbM,  nf  of  2
 3050    -  9 54.3   -10  22 r  Sex              vF,  pS,  vlE,  gbMN
I 574   Gx  9 54.4   -06  58 m  Sex    0.5  15.  p pB,  S,  R,  mbM,  *  12s
 3052   Gx  9 54.5   -18  38 s  Hya    2.1  13.  p F,  pL,  R,  glbM,  nf  of  2
 3054   Gx  9 54.5   -25  42 s  Hya    3.9  12.  p pB,  L,  irr  oblong
 3056   Gx  9 54.5   -28  18 s  Ant    2.0  13.  p pB,  S,  R,  vgmbM,  *11  att  204deg
 3047   Gx  9 54.6   -01  18 r  Sex         14.  p vF,  S,  R
I 575   Gx  9 54.6   -06  51 a  Sex              F,  S,  R,  gbM
I2515   Gx  9 54.6   +37  24 u  LMi    1.1  15.  p F,  cS,  E ns,  r,  biN?
 3049   Gx  9 54.8   +09  16 r  Leo         13.  p vF,  vS,  F*  vnr
I2516   Gx  9 54.8   +37  41 z  LMi         15.  p F,  S,  R,  gbM
 3048   Gx  9 55.0   +16  28 r  Leo         15.  p eF
I 576   Gx  9 55.1   +11  02 z  Leo         15.  p vF,  vS,  R
I2522   Gx  9 55.2   -33  08 s  Ant    2.8  13.  p vF,  cL,  R,  *8  n,  susp
I2523   Gx  9 55.2   -33  13 c  Ant    1.6          vF,  vS,  cE  20deg  ,  susp
 3055   Gx  9 55.3   +04  16 s  Sex    2.2  12.1   F,  pL,  vlE,  vgbM,  rr,  *7  f  92s
 3031   Gx  9 55.6   +69  04 s  UMa   25.7   6.9   !  eB,  eL,  E  156deg  ,  gsvmbMBN;  =  M81
 3053   Gx  9 55.6   +16  26 r  Leo         13.  p vF,  S,  vlE,  gbM
 3064   Gx  9 55.6   -06  22 r  Sex         14.  p eF,  vS,  E  45deg
 3027   Gx  9 55.7   +72  12 s  UMa    4.7  12.  p vF,  vL,  lE,  r
 3034   Gx  9 55.8   +69  41 s  UMa   11.2   8.4   vB,  vL,  vmE  (ray);  =  M82
I2518   Gx  9 56.0   +37  09 z  LMi         16.  p F,  S,  R,  lbM
I2519   Gx  9 56.0   +34  02 z  LMi         16.  p F,  vS,  R,  dif
I 577   Gx  9 56.1   +10  30 u  Leo    0.7  14.  p F,  vS,  iF,  F*  n
 3043   Gx  9 56.2   +59  18 s  UMa    2.0  14.  p cF,  pS,  lE,  vgbM,  *10  n 7'
 3061   Gx  9 56.2   +75  52 s  Dra    2.0  14.  p vF,  pL,  r
I 578   Gx  9 56.3   +10  29 u  Leo    1.3  15.  p F,  vS,  R,  lbM
 3060   Gx  9 56.4   +16  51 r  Leo         14.  p vF,  cS,  vlE,  er
I2520   Gx  9 56.4   +27  14 u  Leo    0.7  14.  p F,  vS,  R,  gbMN,  r
 3062   Gx  9 56.6   +01  26 r  Sex         15.  p vF,  vS,  alm  stellar
I 579       9 56.6   -14  09 d  Hya              pF,  pS,  R
I2526   Gx  9 57.1   -32  15 c  Ant    1.9          vF,  S,  R,  *7.5  nf
I2521   Gx  9 57.3   +34  01 m  LMi    0.5  15.  p F,  S,  dif
I2524   Gx  9 57.5   +33  37 s  LMi    0.7  15.  p F,  vS,  R,  stell
 3072   Gx  9 57.6   -19  21 r  Hya         13.  p vF,  pS,  lE,  glbM
 3076   Gx  9 57.7   -18  11 r  Hya         14.  p eF,  S,  R
 3069   Gx  9 57.9   +10  27 r  Leo         15.  p vF,  vS;  =  IC  580
 3070   Gx  9 58.0   +10  22 r  Leo         13.  p pB,  pS,  R,  gmbMN,  am  3 st
I 580   Gx  9 58.0   +10  27 m  Leo    0.6  15.  p pF,  vS,  iF
I 581   Gx  9 58.2   +15  56 u  Leo    1.1  15.  p pB,  S,  dif,  N = 13  inv
 3067   Gx  9 58.4   +32  22 s  Leo    2.5  11.7   pB,  pL,  E  106deg  ,  gbM,  *9,  74deg  ,  4'
 3078   Gx  9 58.4   -26  56 s  Hya    1.9  11.1   pB,  S,  R,  mbM
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I2525   Gx   9 58.4   +37  06  z   LMi          16.  p F, S,  R,  gbM
 3068   Gx   9 58.5   +28  53  r   Leo          15.  p eeF, eS,  stellar  (?)
 3071   Gx   9 58.9   +31  37  r   Leo          15.  p neb  *13
 3082   Gx   9 58.9   -30  20  r   Ant          14.  p vF,  S,  R,  D* att
 3075   Gx   9 59.0   +14  25  r   Leo          14.  p vvF,  *14 att,  *11  f
 3084   Gx   9 59.0   -27  08  r   Ant          14.  p vF,  S,  R,  *13  att  sf
I 582   Gx   9 59.0   +17  49  u   Leo   1.1    15.  p pB,  S,  iF,  gbm
I 583   Gx   9 59.1   +17  50  u   Leo   1.0    15.  p F,  vS,  gbM
I 584   Gx   9 59.1   +10  22  m   Leo   0.3    15.  p eF,  S,  R,  dif,  3070  p
I2528   Gx   9 59.1   -27  08  c   Ant   2.0          eeF,  eS,  R,  v diffic,  eF  D* s;  = 3084
 3087   Gx   9 59.2   -34  13  s   Ant   1.9    13.  p pB,  S,  R,  pmbM,  bet  2 st
 3081   Gx   9 59.5   -22  50  s   Hya   2.2    12.  p vF,  cS,  lbM,  triangle  S st np;  = IC  2529
I2529   Gx   9 59.5   -22  50  c   Hya   2.3          eeF,  eS,  eF*  att;  = 3081
 3085   Gx   9 59.6   -19  29  r   Hya          14.  p vF,  S,  mE  90deg
 3089   Gx   9 59.6   -28  20  s   Ant   1.9    13.  p pF,  pS,  R,  vS  st  inv
 3074   Gx   9 59.7   +35  24  s   LMi   2.5    15.  p vF,  pL,  iR,  vgvlbM
I 585   Gx   9 59.7   +13  02  n   Leo   0.2    15.  p *13  in  eF,  S  neb
 3080   Gx   9 59.9   +13  03  r   Leo          14.  p vF
 3083   Gx   9 59.9   -02  52  r   Sex          14.  p eF,  S,  E
I 586   Gx   9 59.9   -06  55  m   Sex   0.4    15.  p F,  vS,  mottled
I2531   Gx   9 59.9   -29  37  c   Ant   6.3          eeF,  pS,  cE,  4 st  n,  nf,  D*  np
 3095   Gx  10 00.1   -31  33  s   Ant   3.2    13.  p F,  L,  E,  vgvlbM
I2527   Gx  10 00.1   +38  10  z   LMi          15.  p F,  vS,  R,  N
I2532   Gx  10 00.1   -34  14  c   Ant   1.8          cB,  S,  stell  N
 3086   Gx  10 00.2   -02  58  r   Sex          14.  p eF,  S,  iR
 3091   Gx  10 00.2   -19  38  s   Hya   2.2    13.  p pB,  pS,  iR,  bM,  p  of  2
I2533   Gx  10 00.5   -31  15  c   Ant   1.7          cB,  S,  R
 3090   Gx  10 00.6   -02  57  r   Sex          14.  p vF,  vS
 3096   Gx  10 00.7   -19  39  r   Hya          15.  p eF,  R,  lbM,  f  of  2
 3100   Gx  10 00.7   -31  40  s   Ant   2.8    13.  p pB,  pS,  R,  gpmbM
 3103   Gx  10 00.7   -31  40  D   Ant               eF,  pL,  R;  = 3100
 3105   OC  10 00.8   -54  46  s   Vel   2.     9.7   Cl,  C,  lE,  st  13...16
 3073   Gx  10 00.9   +55  37  s   UMa   1.5    13.  p vF,  S,  vglbM
 3092   Gx  10 00.9   -03  00  r   Sex          14.  p eF,  S
 3093   Gx  10 01.0   -02  57  r   Sex          15.  p eF,  vS
 3088   Gx  10 01.1   +22  24  r   Leo          15.  p vF,  S
 3094   Gx  10 01.5   +15  47  r   Leo          13.  p F,  bM,  *9  0'.5  sf
I2530   Gx  10 01.5   +37  12  z   LMi          15.  p F,  vS,  stell
I2534   Gx  10 01.5   -34  07  c   Ant   2.8          cB,  S,  R
 3063   D*  10 01.6   +72  08  r   UMa               F,  pS,  R
 3101   Gx  10 01.7   -02  59  r   Sex          15.  p eF
 3065   Gx  10 01.9   +72  10  s   UMa   2.0    12.0   pF,  vS,  R,  bM,  *11  nr
 3079   Gx  10 02.0   +55  41  s   UMa   7.6    10.6   vB,  L,  mE  135deg
 3066   Gx  10 02.2   +72  07  s   UMa   1.2    12.9   vF,  vS,  vglbM
I 588   Gx  10 02.2   +03  03  u   Sex   1.1    15.  p F,  S,  R,  mottled
 3098   Gx  10 02.3   +24  43  s   Leo   2.6    12.0   pB,  S,  E  85deg  ,  psbMN
 3108   Gx  10 02.6   -31  41  r   Ant               13.  p F,  S,  R,  gbM
 3099   Gx  10 02.7   +32  42  r   LMi          15.  p eF,  S
 3114   OC  10 02.7   -60  07  s   Car  35.     4.2   Cl,  eL,  lC,  B,  st  9...14
I 587       10 03.0   -02  24  F   Sex               F,  pL,  R
 3109   Gx  10 03.1   -26  09  s   Hya  14.5   10.  p cF,  vL,  vmE  82deg  ,  lbM
 3077   Gx  10 03.3   +68  44  s   UMa   4.6    9.9   cB,  cL,  mbM,  R  with  ray
 3107   Gx  10 03.3   +13  38  d   Leo          13.  p pF,  pL,  iR,  *8,  148deg  ,  112"
I2536   Gx  10 03.5   -33  57  c   Ant   1.9          F,  S,  E  50deg  ,  cbM
 3149   Gx  10 03.8   -80  25  c   Cha   2.1          F,  S,  lE,  vlbM,  *15  inv
 3104   Gx  10 03.9   +40  45  s   LMi   3.2    13.  p eF,  pL,  E,  vF*  inv
 3106   Gx  10 03.9   +31  11  r   LMi          14.  p F,  S,  R,  sbM
I2537   Gx  10 03.9   -27  34  s   Ant   2.7    12.2   eeF,  L,  cE
I2538   Gx  10 03.9   -34  48  c   Ant   1.6          vF,  vS,  R,  cbM
 3112   Gx  10 04.0   -20  46  r   Hya               eF,  eS,  R;  neb?
 3110   Gx  10 04.1   -06  28  r   Sex          13.  p F,  vS,  iR,  r
 3097    - 10 04.3   +60  08  r   UMa               neb*?  2'  np  3102
I2539   Gx  10 04.3   -31  22  c   Ant   1.7          cF,  vS,  cE  30deg  ,  vmbM
 3113   Gx  10 04.4   -28  27  s   Ant   3.2    14.  p eF,  L,  triangle  2 st  8m
I 589       10 04.4   -05  41  d   Sex               vF,  vS,  biN?
I2535   Gx  10 04.5   +38  03  m   LMi   0.7    14.  p pB,  pS,  E  110deg  ,  gbM,  r
 3102   Gx  10 04.6   +60  07  r   UMa          14.  p vF,  vS,  R,  bM,  *11,  142deg
 3115   Gx  10 05.2   -07  43  s   Sex   8.3     9.2   vB,  L,  vmE  46deg  ,  vgsmbMEN
 3120   Gx  10 05.4   -34  13  r   Ant               F,  pS,  R,  gbM
 3057   Gx  10 05.6   +80  17  s   Dra   2.5    14.  p eF,  pL,  vlbM,  2  S st  s
 3136   Gx  10 05.8   -67  23  s   Car   2.5    11.0   pB,  pS,  R,  gbM,  *13  n
I2541   Gx  10 05.8   -17  27  m   Hya   1.2    14.  p F,  eE  5deg  ,  vmbM
 3128   Gx  10 05.9   -16  07  r   Hya          14.  p eF,  pL,  mE  170deg  ,  lbM
I 590   Gx  10 05.9   +00  38  u   Sex   1.1    14.  p F,  dif;  neb  D*?
 3111   Gx  10 06.2   +47  16  r   UMa          14.  p pB,  S,  R,  smbM  *12
 3117   Gx  10 06.2   +02  54  r   Sex          14.  p vF,  vS,  R,  S*  inv
 3127   Gx  10 06.3   -16  07  r   Hya          14.  p eF,  pL,  mE  45deg
 3122   Gx  10 06.5   -06  32  r   Sex               F,  S,  lE,  er
 3116   Gx  10 06.6   +31  06  r   LMi          15.  p neb  *13
 3119   Gx  10 06.6   +14  19  r   Leo          15.  p vF
 3125   Gx  10 06.6   -29  56  s   Ant   1.5    13.  p cF,  S,  R,  vgbM
I2545       10 06.6   -33  51  d   Ant               eF,  eS,  cE  25deg  ,  2 st
 3124   Gx  10 06.7   -19  13  s   Hya   3.2    12.  p F,  pL,  R,  lbM,  D*  s
 3121   Gx  10 06.8   +14  23  r   Leo          14.  p pF,  pL,  glbM,  *9.5  np
I2540   Gx  10 06.9   +31  28  m   LMi   0.8    15.  p F,  vS,  R,  gbMN
 3123    - 10 07.0   +00  04  r   Sex               neb,  no  description
 3132   Pl  10 07.0   -40  26  s   Vel   0.8     8.  p !! PN  ,  vB,  vL,  lE  *9  N,  4s   d
I2546       10 07.1   -33  15  d   Ant               vF,  vS,  R,  bet  2 st
 3133   Gx  10 07.2   -11  57  r   Hya               eF,  vS,  R
 3118   Gx  10 07.3   +33  02  r   LMi          14.  p S group  of  vF  st  in  vF  neb
I 591   Gx  10 07.5   +12  16  s   Leo   1.4    14.  p pF,  S,  R
I 592   Gx  10 07.9   -02  30  u   Sex   1.0    14.  p F,  S,  R,  dif
I2542       10 07.9   +34  10  d   LMi               F,  pS,  glbM
I2548   Gx  10 07.9   -35  14  c   Ant   2.4          eF,  vS,  R,  bM,  dif
 3126   Gx  10 08.2   +31  52  r   LMi          13.  p F,  S,  lE,  N  = *15
 3130   Gx  10 08.2   +09  59  r   Leo          14.  p eF,  S,  psbN,  *5  sf
I 593   Gx  10 08.3   -02  32  u   Sex   0.8    14.  p F,  S,  R,  gbM
 3129    - 10 08.4   +18  25  r   Leo               eF,  cS,  vlE,  r
I2543   Gx  10 08.4   +37  50  z   LMi          16.  p F,  S,  R,  N,  r
I2544   Gx  10 08.4   +33  21  z   LMi          15.  p F,  S,  dif
I 594   Gx  10 08.6   -00  40  u   Sex   1.1    15.  p F,  S,  R,  gbM,  r
 3131   Gx  10 08.7   +18  15  r   Leo          14.  p pB,  pS,  pmE,  gbM
I2554   Gx  10 08.9   -67  02  c   Car   2.7          cF,  S,  cE  10deg  ,  N,  spir
 3138   Gx  10 09.1   -11  58  r   Hya          15.  p eF,  vS,  R,  1st  of  2
 3137   Gx  10 09.2   -29  04  t   Ant   6.8          vF,  S,  lE
 3141    - 10 09.3   -16  38  r   Hya               eF,  S,  R,  2nd  of  2
I2553   Pl  10 09.3   -62  37  s   Car   0.2    13.  p PN  ,  stellar
 3134    - 10 09.5   +12  20  r   Leo               vF,  disc
 3140   Gx  10 09.5   -16  37  s   Hya   1.4    14.  p eF,  pS,  R,  sbMN,  1st  of  2
 3195   Pl  10 09.5   -80  52  s   Cha   0.6          !  PN  ,  pB,  S,  lE,  13s   d,  3  S st  nr
I 595   Gx  10 09.7   +11  00  z   Leo          15.  p F,  vS,  R,  lbM
 3139   Gx  10 10.1   -11  47  r   Hya          15.  p eF,  vS,  R,  2nd  of  2
 3142   Gx  10 10.1   -08  29  r   Sex          14.  p F,  R
 3143   Gx  10 10.1   -12  35  s   Hya   0.9    14.  p F,  S
I2547       10 10.1   +36  31  d   LMi               F,  S,  R,  dif
 3145   Gx  10 10.2   -12  26  s   Hya   3.3    12.  p F,  pL,  mE,  vgslbM,  lambda  Hya  np
I 597       10 10.2   -06  54  d   Sex               F,  vS,  R
I2549       10 10.2   +36  28  d   LMi               F,  S,  R,  gvlbM
I2550   Gx  10 10.4   +27  57  u   LMi   1.1    15.  p F,  cS,  R,  dif
I 596   Gx  10 10.6   +10  02  m   Leo   0.8    15.  p F,  S,  dif
I2551   Gx  10 10.7   +24  25  u   Leo   1.3    15.  p F,  vS,  R,  stell
I2552   Gx  10 10.8   -34  51  c   Ant   1.8          cB,  S,  R,  bM
 3135   Gx  10 10.9   +45  58  r   UMa          14.  p F,  S,  R,  gbM
 3146   Gx  10 11.2   -20  52  r   Hya          13.  p eF,  S,  R,  gbM
I2555   Gx  10 11.7   -31  39  c   Ant   2.4          eF,  vS,  eE  45deg  ,  cbM;  = 3157
 3157   Gx  10 11.8   -31  38  A   Ant               vF,  pS,  E,  *8-9  sp
I2556   Gx  10 12.6   -34  44  c   Ant   2.1          eF,  S,  stell  N
 3156   Gx  10 12.7   +03  08  s   Sex   2.1    13.  p F,  cS,  R,  psbM,  *9-10  sf  2'
 3153   Gx  10 12.9   +12  40  s   Leo   2.3    13.  p eF,  pL,  vlE,  r,  st  inv
 3154   Gx  10 13.1   +17  03  r   Leo          14.  p F,  S,  R,  lbM
I 598       10 13.1   +43  14  d   UMa               vF,  vS,  R,  bM,  alm  stell

I 599   Gx  10 13.3   -05  38  m   Sex   1.0    14.  p pF,  S,  vlbM
 3148   Gx  10 13.4   +50  28  r   UMa          16.  p *7  in  photosphere  2'  or  3'  d
 3150   Gx  10 13.4   +38  41  r   LMi          15.  p vF,  S
 3151   Gx  10 13.5   +38  37  s   LMi   1.0    15.  p vF,  vS
 3162   Gx  10 13.5   +22  44  s   Leo   3.1    11.6   pF,  cL,  R,  vglbM,  r,  S*  inv
 3165   Gx  10 13.5   +03  23  s   Sex   1.6    15.  p vF,  mE  0deg  ,  1st  of  3
 3152   Gx  10 13.6   +38  50  v   LMi   1.0          eF,  vS,  iR,  eF*  close  sp
 3158   Gx  10 13.8   +38  46  s   LMi   2.3    11.8   cB,  cS,  R,  psbM,  r
 3166   Gx  10 13.8   +03  26  s   Sex   5.2    10.6   B,  pS,  R,  psmbM,  2nd  of  3
 3159   Gx  10 13.9   +38  39  s   LMi   1.3    13.4   vF,  vS,  stellar
 3160   Gx  10 13.9   +38  52  r   LMi          15.  p vF,  vS,  lE
 3161   Gx  10 14.0   +38  39  v   LMi   1.0          vF,  vS
 3163   Gx  10 14.1   +38  39  s   LMi   1.4    13.1   F,  S,  R,  gbM
 3169   Gx  10 14.2   +03  28  s   Sex   4.8    10.5   B,  pL,  vlE,  pgmbM,  *11,  78deg  ,  80",  3rd  of
    3
 3197   Gx  10 14.4   +77  49  r   Dra          14.  p vF,  vS  (place??)
 3173   Gx  10 14.5   -27  41  r   Ant          14.  p eF,  S,  R,  2  B st  f
 3167    - 10 14.6   +29  36  r   LMi               F,  S;  vS  Cl  of  vF  st?
 3175   Gx  10 14.7   -28  52  s   Ant   4.8    11.3   cB,  L,  mE  51deg  ,  vglbM
I2558   Gx  10 14.7   -34  20  c   Ant   1.6          cF,  vS,  cE  10deg  ,  cbM
I2559   Gx  10 14.8   -34  04  c   Ant   1.8          eF,  S,  lE  10deg  ,  cbM
 3164   Gx  10 15.2   +56  41  r   UMa          14.  p eF,  S,  R,  vglbM
 3176    - 10 15.3   -19  01  r   Hya               eF,  pS,  iR;  neb?
 3144   Gx  10 15.5   +74  13  s   Dra   1.4    14.  p vF,  S,  R,  *13  att  f
 3171   Gx  10 15.6   -20  39  F   Hya               eF,  S,  R,  gbM
 3170    - 10 16.1   +46  36  r   UMa               F,  S,  R
 3178   Gx  10 16.1   -15  47  r   Hya          13.  p pB,  pL,  gpmbM
I2557   Gx  10 16.1   +38  05  m   LMi   0.3    15.  p vF,  vS,  R
I2560   Gx  10 16.3   -33  34  c   Ant   4.1          eF,  pS,  am  4  st
 3168   Gx  10 16.4   +60  14  r   UMa          14.  p F,  psbM,  stellar,  *7-8  np  5'
 3177   Gx  10 16.6   +21  07  s   Leo   1.7    12.3   cF,  S,  R,  psbM
 3147   Gx  10 16.9   +73  24  s   Dra   4.0    10.7   vB,  L,  R,  vgvsvmbM
 3199   Nb  10 17.1   -57  55  s   Car  22.           !  vB,  vL,  falcate,  D*  inv
I 600   Gx  10 17.2   -03  30  t   Sex   2.3          F,  pS,  R,  gbM
 3155   Gx  10 17.6   +74  21  r   Dra          14.  p vF,  S,  R
 3185   Gx  10 17.6   +21  41  s   Leo   2.3    12.2   pF,  pL,  gmbM
 3186   Gx  10 17.6   +06  57  r   Leo          15.  p pF,  vS,  gbM,  sev  F  st  nr
 3201   Gb  10 17.6   -46  25  s   Vel  18.2     6.8   glob.  cl.  ,  vL,  iR,  lCM,  st  13...16
 3187   Gx  10 17.8   +21  52  s   Leo   3.3    13.1   vF,  E
 3211   Pl  10 17.8   -62  40  s   Car   0.2    12.  p plan  =  *10,  R,  am  150  st
 3179   Gx  10 18.0   +41  06  r   UMa          14.  p S,  R,  bMN,  in  line  with  2 st
 3180    - 10 18.1   +41  25  r   UMa               vF,  E,  connected  with  3184
 3190   Gx  10 18.1   +21  50  s   Leo   4.6    11.0   B,  pS,  E,  psbMN
 3181    - 10 18.2   +41  24  r   UMa               vF,  E,  connected  with  3184
 3189   Gx  10 18.2   +21  50  u   Leo   4.5    12.  p vvF,  mE,  parallel  to  3190
I 601   Gx  10 18.2   +07  02  m   Leo   0.6    15.  p vF,  vS,  dif,  sbM
 3184   Gx  10 18.3   +41  25  s   UMa   6.9     9.8   pB,  vL,  R,  vgbM
I 602   Gx  10 18.3   +07  03  v   Leo   1.1          pB,  S,  E  ns
 3193   Gx  10 18.4   +21  54  s   Leo   2.8    10.9   B,  S,  vlE,  psbM,  *9.5  354deg  ,  80"
 3200   Gx  10 18.6   -17  59  s   Hya   4.8    12.  p pB,  E  160deg  ,  bMN
 3196   Gx  10 18.8   +27  40  r   Leo          15.  p eeF,  pS,  lE
I2562   Gx  10 18.8   +16  08  m   Leo   0.6    15.  p F,  S,  gbM,  dif
I2563   Gx  10 18.9   -32  36  c   Ant   1.6          eF,  vS,  eE  110deg  ,  eF*  s
 3192   Gx  10 19.0   +46  27  A   UMa               eF,  vS;  = 3191
 3191   Gx  10 19.1   +46  28  s   UMa   0.8    14.  p F,  S,  R,  bM
I2561   Gx  10 19.1   +34  40  u   LMi   1.1    15.  p F,  S,  E  200deg  ,  gbM
I 603   Gx  10 19.4   -05  39  m   Sex   0.4    14.  p F,  vS,  R,  N  =  13.5
 3182   Gx  10 19.5   +58  12  s   UMa   2.3    13.  p cB,  cL,  iR,  vgbM
 3203   Gx  10 19.6   -26  42  s   Hya   3.0    13.  p pB,  S,  cE,  gbM
 3188   Gx  10 19.7   +57  25  s   UMa   1.1    15.  p vF,  pL,  r
 3208   Gx  10 19.7   -25  51  s   Hya   1.9    14.  p eF,  pL,  iR,  gbM
 3198   Gx  10 19.9   +45  33  s   UMa   8.3    10.4   pB,  vL,  mE  45deg  ,  vgbM
 3204   Gx  10 20.2   +27  49  r   Leo          15.  p eF,  pL,  gbM
 3202   Gx  10 20.5   +43  01  s   UMa   1.4    14.  p cF,  S,  R,  vgbM,  1st  of  3
 3209   Gx  10 20.6   +25  29  r   Leo          14.  p F,  S,  R,  has  a  *
 3174    - 10 20.8   +75  09  r   Dra               cF,  S,  stellar,  S*  f  nr;  = 3144?
 3205   Gx  10 20.8   +42  57  r   UMa          14.  p cF,  S,  R,  vgbM,  2nd  of  3
 3207   Gx  10 21.0   +42  58  r   UMa          14.  p cF,  S,  R,  stellar,  3rd  of  3
 3213   Gx  10 21.3   +19  39  s   Leo   1.2    14.  p vF,  vS,  R,  r
I2565   Gx  10 21.3   +27  56  v   LMi               F,  vS,  R,  stell
 3217    - 10 21.4   +10  53  r   Leo               vF  disc
I2564       10 21.4   +36  27  d   LMi               F,  S,  R,  gbM  stell  N
 3223   Gx  10 21.6   -34  16  s   Ant   4.1    12.  p pB,  vL,  vlE,  psbMN;  = IC  2571
 3224   Gx  10 21.6   -34  42  r   Ant               vF,  pS,  R,  vgmbM
I2570   Gx  10 21.6   -33  37  c   Ant   1.3          eF,  eS,  mE  150deg  ,  3 st  sf
I2571   Gx  10 21.6   -34  16  c   Ant   4.3          vF,  cS,  R,  mbM,  *9  f  9s ;  = 3223
 3216   Gx  10 21.7   +23  54  r   Leo          15.  p vF,  pS,  R,  bM
 3183   Gx  10 21.8   +74  10  s   Dra   2.5    13.  p F,  pL,  E,  lbM
 3206   Gx  10 21.8   +56  56  s   UMa   3.0    12.  p pB,  cL,  E,  vglbM
 3228   OC  10 21.8   -51  43  s   Vel  18.     6.0   Cl,  9  L  and  a  few  S st
 3233   Gx  10 22.0   -22  16  r   Hya          14.  p eF,  pL,  iF,  stell  N
I2567   Gx  10 22.0   +24  39  m   Leo   0.7    16.  p F,  vS,  R,  r
 3221   Gx  10 22.3   +21  34  s   Leo   3.3    14.  p eF,  mE,  ray
I 605   Gx  10 22.4   +01  12  u   Sex   0.7    14.  p f,  S,  R,  gbM
I2566   Gx  10 22.4   +36  36  m   LMi   0.7    15.  p F,  S,  R,  gbM,  r
I2568       10 22.5   +36  38  d   LMi               F,  S,  R,  N,  r
 3222   Gx  10 22.6   +19  53  s   Leo   1.3    12.8   F,  lbM,  rr;  biN?
 3219   Gx  10 22.7   +38  34  r   LMi          15.  p eF,  S,  R,  lbM
I2569       10 22.9   +24  36  d   Leo               R,  vS,  R,  stell
 3194    - 10 23.0   +74  47  r   Dra               vF,  vS;  = 3155?
 3214   Gx  10 23.1   +57  02  s   UMa   1.0    15.  p cB,  vS,  R,  sbM,  5'  p  3220
 3226   Gx  10 23.4   +19  54  s   Leo   2.8    11.4   pB,  cL,  R,  D  with  3227,  pos  159deg  ,  138"
 3229   D*  10 23.4   +00  04  A   Sex               F
 3227   Gx  10 23.5   +19  52  s   Leo   5.6    10.8   pB,  cL,  R,  D  with  3226
I 606   Gx  10 23.5   +10  58  m   Leo   0.4    15.  p vF,  vS,  R,  dif
I2573   Gx  10 23.5   -35  27  c   Ant   1.5          eF,  vS,  eE  0deg
 3220   Gx  10 23.7   +57  02  s   UMa   1.6    14.  p pF,  cL,  E  92deg  ,  *9  f  9'.5
 3230   Gx  10 23.7   +12  33  r   Leo          14.  p pF,  pS,  sbM  *14,  *9-10  s  19"
I 604       10 23.8   +57  02  d   UMa               eeF,  vS,  vmE  (sev  eF  st  in  line?)
I 607   Gx  10 24.2   +16  45  u   Leo   1.5    15.  p eeF,  pS,  R,  v  diffic,  *  sp
 3232   Gx  10 24.3   +28  01  r   LMi          15.  p eF,  *11  p  150",  ls,  p  of  2
 3241   Gx  10 24.3   -32  29  s   Ant   1.5    12.7   F,  pmE,  glbM,  *11  np
I 608   Gx  10 24.3   -06  02  m   Sex   0.7    15.  p F,  S,  R
 3240   Gx  10 24.5   -21  47  r   Hya          14.  p eF,  S,  R,  *  nr
 3242   Pl  10 24.8   -18  38  s   Hya  20.8     9.  p !  PN  ,  vB,  lE  147deg  ,  45"  d,  blue
 3234       10 24.9   +27  01  D   Leo               pB,  pS,  R,  psbM
 3235   Gx  10 24.9   +28  01  r   LMi          14.  p F,  S,  f  of  2
I2572   Gx  10 25.0   +28  06  u   LMi   1.0    16.  p pF,  S,  iF
 3225   Gx  10 25.1   +58  09  s   UMa   2.3    13.  p cF,  pL,  lE,  vgbM
 3239   Gx  10 25.1   +17  10  s   Leo   5.2    12.  p vF,  *9  inv  nr  M
I2575       10 25.4   -32  39  d   Ant               eF,  vS,  R
 3244   Gx  10 25.5   -39  50  v   Ant   1.9          vF,  *11  n  90"
I 609   Gx  10 25.5   -02  13  u   Sex   1.6    14.  p F,  pL,  R
 3237   Gx  10 25.8   +39  39  r   UMa          14.  p vF,  vS,  R,  pgbM
 3247  C+N  10 25.9   -57  56  s   Car   7.     7.6   st  inv  in  neb
I2576       10 26.0   -32  55  d   Ant               F,  S,  R
 3249   Gx  10 26.3   -34  58  r   Ant               eF,  pL,  R,  vgvlbM
 3243   Gx  10 26.4   -02  38  r   Sex          14.  p vF,  S,  lE,  bet  2  st
 3218    - 10 26.5   +74  39  r   Dra               cB,  cL,  er  (place??)
 3250   Gx  10 26.5   -39  57  s   Ant   3.2    11.0   pB,  pL,  R,  vgpsbM,  *13,  45deg
 3255   OC  10 26.5   -60  40  s   Car   2.     11.0   Cl,  pS,  vC,  st  15
I 610   Gx  10 26.5   +20  14  v   Leo   2.1          eeF,  pS,  cE,  e  diffic;  = IC  611
I 611   Gx  10 26.5   +20  14  x   Leo               eF,  S,  lE
 3231    - 10 26.7   +66  48  r   UMa               Cl,  cL,  P,  lC,  st  10...12
 3238   Gx  10 26.7   +57  14  s   UMa   1.6    14.  p F,  S,  R,  psbM
 3246   Gx  10 26.7   +03  52  s   Sex   2.3    13.  p eF,  S,  R,  2  st  triangle,  *6,  300deg  ,  8'
 3236   Gx  10 26.8   +61  16  r   UMa          15.  p eF,  vS,  psbM,  2  st  11-12  f
I 614   Gx  10 26.9   -03  27  m   Sex   0.7    15.  p vF,  dif
I 612   Gx  10 27.1   +11  03  m   Leo   0.3    15.  p F,  vS,  dif,  vlbM
I 613   Gx  10 27.1   +11  01  m   Leo   0.3    15.  p F,  vS,  R
 3210   Gx  10 27.2   +79  51  a   Dra               stellar,  1st  of  3  in  line,  1'  apart
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 3245   Gx 10 27.3   +28 30 s  LMi    3.2   10.8   vB,  pL,  E 0deg  , smbMEN
I 615   Gx 10 27.3   +11 05 u  Leo    1.4   15. p vF,  S,  R
I2578   Gx 10 27.4   -33 53 c  Ant    1.4          eF,  vS,  eE 135deg
I2581   OC 10 27.4   -57 38 s  Car    8.     4.3   Cl,  around  *5.4m
 3248   Gx 10 27.8   +22 50 r  Leo          14. p pB,  S,  R,  psbM
 3256   Gx 10 27.8   -43 54 s  Vel    3.5   11.3   cB,  S,  R,  gmbM
I2577   Gx 10 28.0   +32 46 m  LMi    0.5   15. p F,  cS,  r,  *12  nr
 3212   Gx 10 28.1   +79 47 r  Dra          14. p vF,  S,  2nd  of  3
I2580   Gx 10 28.3   -31 31 c  Ant    2.1          cB,  S,  bM
I2574   Gx 10 28.4   +68 25 s  UMa   12.3   10.6   vF,  vL,  iF
 3253   Gx 10 28.5   +12 42 s  Leo    1.4   14. p vF,  pS,  R
 3257   Gx 10 28.8   -35 40 s  Ant    1.1          vF,  vS,  R,  psbM,  1st  of  4
 3258   Gx 10 28.9   -35 36 s  Ant    1.8   11.7   cF,  S,  R,  pslbM,  2nd  of  4
 3215   Gx 10 29.0   +79 46 r  Dra          14. p vF,  S,  3rd  of  3
 3261   Gx 10 29.0   -44 39 s  Vel    4.1   12. p F,  S,  R,  am  st
 3260   Gx 10 29.1   -35 36 s  Ant    1.3          vvF,  vS,  R,  pslbM,  3rd  of  4
 3262   Gx 10 29.2   -44 10 v  Vel    1.2          eF,  S,  R
I2582   Gx 10 29.2   -30 21 c  Ant    1.5          bM,  indistinct  (corner  of  plate)
 3251   Gx 10 29.3   +26 05 r  Leo          14. p vF,  pL,  3  B  st  sp;  = IC  2579
 3254   Gx 10 29.3   +29 30 s  LMi    5.1   11.5   cB,  L,  mE  45deg  ,  psmbMN
 3263   Gx 10 29.3   -44 08 v  Vel    3.6          F,  S,  mE  280deg  ,  psbM
I2579      10 29.3   +26 07 x  Leo                pB,  pL,  E  260deg  ,  bM;  = 3251?
 3267   Gx 10 29.8   -35 19 s  Ant    2.4   13. p eF,  vS,  R,  1st  of  4
I2584   Gx 10 29.9   -34 55 c  Ant    1.5          cB,  bM
 3268   Gx 10 30.0   -35 20 s  Ant    2.0   11.8   F,  S,  R,  2nd  of  4
 3269   Gx 10 30.0   -35 13 s  Ant    3.1   13. p F,  S,  R,  bM,  3rd  of  4
I2585   Gx 10 30.4   -35 22 c  Ant    2.7          cB,  bM;  = 3271
 3271   Gx 10 30.5   -35 22 s  Ant    2.3   11.7   pF,  S,  E,  pmbM,  4th  of  4
 3273   Gx 10 30.5   -35 37 s  Ant    2.3   13. p vF,  vS,  R,  pslbM,  4th  of  4
 3275   Gx 10 30.9   -36 44 s  Ant    2.8   12. p F,  L,  vlE,  pslbM
I2586   Gx 10 31.0   -28 43 c  Hya    1.6          pF,  vS,  R,  4  st  nr  sp
I2587   Gx 10 31.0   -34 34 c  Ant    2.4          cB,  bM
 3265   Gx 10 31.1   +28 48 s  LMi    1.2   14. p pF,  S,  R,  psbM,  *  sf
 3276   Gx 10 31.1   -39 57 r  Ant                F,  S,  *8  p
I2583   Gx 10 31.2   +26 03 m  Leo    0.3   15. p F,  vS,  R,  stell
 3270   Gx 10 31.5   +24 51 r  Leo          14. p cF,  vS,  E,  glbM
 3278   Gx 10 31.6   -39 57 r  Ant                F,  S,  R,  D*  nf
I2588   Gx 10 31.8   -30 23 c  Ant    1.5          eeF,  pL,  R,  D*  nr  sf
 3281   Gx 10 31.9   -34 51 s  Ant    3.3   11.7   eF,  pL,  E,  glbM
I2589      10 32.1   -24 03 d  Hya                eeF,  eS,  v  diffic,  *13  sf,  *9  p  1'
 3272   Gx 10 32.2   +28 27 r  LMi                F,  vS,  iR,  3277  nf
 3274   Gx 10 32.3   +27 40 s  Leo    2.2   12.8   F,  pL,  R,  glbM,  D*  f
 3282   Gx 10 32.3   -22 18 r  Hya          14. p eF*  in  eF,  vS  neb,  bet  2  st
 3264   Gx 10 32.4   +56 05 s  UMa    3.4   13. p eF,  bet  2  S  st
 3259   Gx 10 32.6   +65 03 s  UMa    2.3   13. p F,  S,  R,  gbM
 3280   Gx 10 32.6   -12 39 r  Hya          16. p F,  biN
 3295   Gx 10 32.7   -12 38 D  Hya                eF,  pL,  bM,  D  or  st  inv;  = 3280
 3296   Gx 10 32.7   -12 43 r  Hya                eF,  pS,  R,  bM
I 616   Gx 10 32.8   +15 52 u  Leo    1.1   15. p F,  pS,  R
I 617   Gx 10 32.8   -12 38 m  Hya    0.1   16. p vF,  vS,  R,  bM
I 618      10 32.8   -12 44 d  Hya                F,  S,  E  pf,  lbM
 3277   Gx 10 32.9   +28 31 s  LMi    2.0   11.7   cB,  cS,  R,  pgmbM
 3283      10 32.9   -46 05 r  Vel                pF,  S,  R,  gbM
 3266   Gx 10 33.3   +64 45 s  UMa    1.7   14. p cF,  vS,  R,  psmbM  *
I 621   Gx 10 33.3   +02 40 z  Sex          15. p F,  S,  R
I 619      10 33.5   +12 33 d  Leo                eeF,  S,  R,  3  F  st  f
I 620   Gx 10 33.5   +11 53 z  Leo          15. p vF,  vS
 3285   Gx 10 33.6   -27 27 s  Hya    2.5   13. p pB,  S,  lE,  gbM,  1st  of  9
 3289   Gx 10 34.2   -35 20 s  Ant    2.2          eF,  vS,  R
I2596   Gx 10 34.2   -73 14 c  Car    1.4          eF,  pS,  bM
 3252   Gx 10 34.4   +73 46 s  Dra    2.1   14. p eF,  pS,  mE,  r
 3279   Gx 10 34.6   +11 12 r  Leo          14. p F,  mE
I 622   Gx 10 34.6   +11 11 u  Leo    2.9   14. p vF,  pS,  E,  *  9s
 3287   Gx 10 34.8   +21 39 s  Leo    2.2   13. p F,  pL,  D*  p  24s  ,  s  4'
 3290   Gx 10 35.1   -17 16 s  Hya    1.4   14. p eF,  S,  lE  0deg  ,  gbM,  B*  n  6'
I2592   Gx 10 35.1   -43 42 c  Vel    1.9          F,  pL,  cE  15deg  ,  spir?;  =  3366
 3366   Gx 10 35.2   -43 41 r  Vel                F,  E,  gbM,  *6-7  vnr
 3297    - 10 35.4   -12 42 r  Hya                eF,  S,  iR
I 623   Gx 10 35.4   +03 33 u  Sex    1.1   15. p F,  S,  R
 3292   Gx 10 35.6   -06 11 r  Sex          14. p vF,  vS,  lE
 3293  C+N 10 35.8   -58 14 s  Car   40.     4.7   Cl,  B,  Ri,  pL
 3302   Gx 10 35.8   -32 22 r  Ant          14. p eF,  S,  R
 3284    * 10 36.0   +58 32 r  UMa                eF,  vS
 3291   Gx 10 36.1   +37 15 h  LMi    1.0   14. p *13  inv  in  vF  neb
I2594   Gx 10 36.1   -24 19 c  Hya    2.2          eF,  pS,  R,  bet  2  wide  D  st
 3286   Gx 10 36.3   +58 37 r  UMa          14. p vF,  pS,  R,  pslbM
 3294   Gx 10 36.3   +37 20 s  LMi    3.3   11.7   cB,  L,  mE  135deg  ,  glbM
 3305   Gx 10 36.3   -27 10 s  Hya          14. p vF,  S,  R,  2nd  of  9
 3307   Gx 10 36.3   -27 32 s  Hya    1.0   16. p eeF,  3rd  of  9
I 624   Gx 10 36.3   -08 21 v  Sex    3.3          F,  vS,  R
I2590   Gx 10 36.3   +26 58 u  Leo    1.1   15. p F,  S,  R,  gbM,  *12  close
I2593      10 36.3   -12 43 d  Hya                eF,  cS;  *?
 3288   Gx 10 36.4   +58 33 s  UMa    1.2   15. p eF,  cS,  R,  vglbM
 3299   Gx 10 36.4   +12 42 s  Leo    2.1   13. p eF,  cL,  R,  vgbM,  r
 3308   Gx 10 36.4   -27 26 s  Hya    2.0   12.2   F,  S,  R,  4th  of  9
I 625      10 36.5   -23 55 d  Hya                eF,  pL,  E  110deg  ,  dif
 3300   Gx 10 36.6   +14 10 s  Leo    2.1   13. p cF,  cS,  R,  pmbM,  r,  am  B  st
 3309   Gx 10 36.6   -27 31 s  Hya    1.9   11.9   B,  L,  R,  p  of  Dneb,  5th  of  9
I2591   Gx 10 36.6   +35 02 u  LMi    1.5   14. p F,  cS,  E  200deg
 3311   Gx 10 36.7   -27 32 s  Hya    2.5   11.6   B,  L,  R,  f  of  Dneb,  6th  of  9
 3301   Gx 10 36.9   +21 53 s  Leo    3.6   11.4   cB,  S,  lE  53deg  ,  psbM,  r
 3760      10 36.9   +21 53 D  Leo                B,  pS,  mbMN  =  *13,  *11  p  4s  ,  s  175";  =
    3301
 3312   Gx 10 37.0   -27 34 s  Hya    3.6   12. p cF,  E,  gbM,  7th  of  9;  =  IC  629
I 626   Gx 10 37.0   -07 01 m  Sex          14. p F,  S,  R,  r
I 629   Gx 10 37.0   -27 34 c  Hya    3.0          vF,  vS  st  inv,  Cl?;  =  3312
 3303   Gx 10 37.1   +18 08 s  Leo    3.0   15. p vF,  vS,  vlE,  glbM,  r
 3298   Gx 10 37.2   +50 06 r  UMa          15. p vF,  pS,  iE
 3306   Gx 10 37.2   +12 39 s  Leo    1.5   14. p F,  S,  R
 3314   Gx 10 37.2   -27 41 s  Hya    2.0   14. p 8th  of  9  neb
 3315      10 37.3   -27 46 A  Hya                vF,  pL,  iR,  gvlbM,  *  1'  np;  =  3314
 3318   Gx 10 37.3   -41 38 s  Vel    2.6   12. p cF,  pL,  pmE,  lbM
 3324  C+N 10 37.3   -58 38 s  Car   16.     6.7   pB,  vvL,  iF,  D*  inv
I 627   Gx 10 37.3   -03 22 m  Sex    0.4   14. p F,  S,  r
 3317   Gx 10 37.4   -27 29 m  Hya    0.6   14. p neb*,  5'  n  of  3316
I2599      10 37.4   -58 37 d  Car                *8.5  in  neb,  3324  f  6s  ,  6'  s
 3313   Gx 10 37.5   -25 19 r  Hya          13. p eF,  pS,  iR,  gbMN,  *15  s  3"
 3304   Gx 10 37.6   +37 27 s  LMi    1.7   14. p vF,  cS,  psbM,  er
 3316   Gx 10 37.6   -27 36 s  Hya    1.2   15. p F,  S,  R,  bM,  9th  of  9
I 628   Gx 10 37.6   +05 35 u  Sex    1.0   15. p vF,  vS,  iF
I2595      10 37.6   -11 07 d  Sex                cB,  eS,  R,  alm  stell
I2597   Gx 10 37.8   -27 05 c  Hya    3.0          pB,  pS,  D*  nr  p
I 630   Gx 10 38.5   -07 10 m  Sex          13. p F,  eS,  stellar,  *9.5  sp  1'.5
 3330   OC 10 38.6   -54 09 s  Vel    7.     7.4   Cl,  P,  st  9...
 3310   Gx 10 38.7   +53 30 s  UMa    3.6   10.9   cB,  pL,  R,  vg,  vsmbMN  15"
 3321   Gx 10 38.8   -11 39 t  Hya    2.7          eF,  pS,  mE  160deg  ,  *  np  end
 3322      10 38.8   -11 39 D  Hya                F,  iF,  *  p;  =  3321
 3331   Gx 10 39.0   -23 49 D  Hya          14. p vF,  S,  vlE  0deg
I 631      10 39.0   -07 03 d  Sex                vF,  vS,  dif
 3319   Gx 10 39.2   +41 41 s  UMa    6.8   11.3   cF,  L,  iE,  mb,  s  of  M
I 632   Gx 10 39.2   -00 25 u  Sex    1.0   15. p F,  S,  R,  gbM
 3325   Gx 10 39.3   -00 13 r  Sex          14. p F,  vS,  vS*  inv
I 633   Gx 10 39.4   -00 24 u  Sex    0.6   14. p vF,  vS,  R,  SN
 3326   Gx 10 39.5   +05 06 r  Sex          14. p vF,  eS,  stellar
 3320   Gx 10 39.6   +47 24 s  UMa    2.2   13. p F,  pS,  mE,  *10  nf
 3335   Gx 10 39.6   -23 56 r  Hya          14. p vF,  S,  iR,  gbM
 3323   Gx 10 39.7   +25 19 r  LMi          14. p vF,  vS,  R,  lbM
 3328      10 39.7   +09 13 D  Leo                vS  Cl,  not  nebs
I2598   Gx 10 39.7   +26 44 z  LMi          15. p F,  S,  R,  N,  r
 3333   Gx 10 39.9   -36 03 v  Ant                eF,  vS,  mE,  *15  att
 3327   Gx 10 40.0   +24 05 r  LMi          14. p vF,  S,  R,  gbM,  vS*  att
 3336   Gx 10 40.3   -27 46 r  Hya          13. p vF,  pL,  lE,  glbM
 3332   Gx 10 40.4   +09 11 r  Leo          13. p vF,  S,  lE  130deg
I 634   Gx 10 40.9   +05 59 u  Sex    1.3   15. p vF,  S,  r
 3334   Gx 10 41.4   +37 18 r  LMi          14. p cF,  vS,  R,  bM
I 635   Gx 10 41.7   +15 39 u  Leo    1.3   15. p F,  S,  R,  gbM
 3337   Gx 10 41.8   +04 59 r  Sex          15. p eF,  vS,  alm  stellar
I 636   Gx 10 41.9   +04 20 u  Sex    1.1   15. p vF,  vS,  r
 3338   Gx 10 42.1   +13 45 s  Leo    5.5   10.8   F,  cL,  E,  vgbM,  *7  p  10s
 3339    * 10 42.2   -00 22 A  Sex                eF,  stellar
 3340   Gx 10 42.3   -00 23 A  Sex          13. p F,  S,  R
 3436   Gx 10 42.4   +07 56 r  Leo                eS
I 637   Gx 10 42.4   +15 20 z  Leo          15. p F,  vS,  in  line  w  3  st
 3341   Gx 10 42.6   +05 02 r  Sex          15. p vF,  vS
 3342    * 10 42.7   +09 26 r  Leo                eF,  eS
 3347   Gx 10 42.8   -36 22 s  Ant    4.4   13. p pF,  S,  mE  0deg  +/-  ,  vsvmbM,  1st  of  3
 3354   Gx 10 43.1   -36 22 s  Ant          14. p F,  S,  vlE,  psbM,  2nd  of  3
I2602   OC 10 43.2   -64 24 s  Car   50.     1.9   Cl,  co,  incl  theta  Car
 3344   Gx 10 43.5   +24 55 s  LMi    6.9   10.0   cB,  L,  gbM,  *  inv,  2  st  f
 3355    - 10 43.5   -23 12 r  Hya                neb,  no  description
 3345   D* 10 43.6   +11 59 r  Leo                eeF  (if  anything)
 3358   Gx 10 43.6   -36 23 s  Ant    3.8   13. p cF,  vS,  vlE,  vS*  att,  3rd  of  3
 3346   Gx 10 43.7   +14 52 s  Leo    2.8   12. p cF,  vL,  R,  vgvlbM,  er
 3349   Gx 10 43.8   +06 45 r  Leo          15. p eF,  vS
 3372   Nb 10 43.8   -59 52 s  Car  120.                !  great  neb,  eta  Car
I 638   Gx 10 43.8   +15 53 z  Leo          15. p F,  vS,  R
 3351   Gx 10 44.0   +11 42 s  Leo    7.4    9.7   B,  L,  R,  pgmbMN;  =  M95
 3356   Gx 10 44.2   +06 45 r  Leo          13. p vF,  pS,  R,  bM,  *9  s  150"  +/-
 3352   Gx 10 44.3   +22 22 r  Leo          14. p pB,  S,  R,  bMN
 3360      10 44.3   -11 36 D  Sex                vF,  R,  pair  with  3361
 3350   Gx 10 44.4   +30 43 r  LMi          15. p eF,  vS,  2  st  9-10  s
 3357   Gx 10 44.4   +14 05 s  Leo    1.9   15. p F,  S,  mbM
 3361      10 44.4   -11 37 D  Sex                mE  160deg  ,  brighter  than  3360
 3329   Gx 10 44.7   +76 49 s  Dra    2.1   13. p pB,  S,  lE,  psmbM
 3362   Gx 10 44.8   +06 36 r  Leo          13. p vF,  pS,  R,  lbM,  r
 3363   Gx 10 45.3   +22 04 r  Leo          14. p F,  pS,  iR,  lbM,  r
 3353   Gx 10 45.4   +55 58 s  UMa    1.5   12.7   F,  cS,  R,  pgbM,  *  s  90"
I 639   Gx 10 45.9   +16 56 m  Leo    0.7   15. p eF,  S,  mE  ns,  *10  nf  5'
 3343   Gx 10 46.1   +73 21 s  Dra    1.6   15. p pF,  S,  R,  gbM
 3365   Gx 10 46.3   +01 49 s  Sex    4.7   13. p eF,  L,  eE  159deg  ,  vgvlbM
 3359   Gx 10 46.6   +63 13 s  UMa    6.8   10.5   pB,  L,  E  0deg  ,  glbM
 3367   Gx 10 46.6   +13 45 s  Leo    2.3   11.5   pB,  cL,  iR,  vglbM,  r,  1st  of  3
 3378   Gx 10 46.6   -40 01 r  Ant                cF,  S,  R,  glbM
 3369   Gx 10 46.7   -25 15 r  Hya          15. p eF,  vS,  R
I2600   Gx 10 46.7   +72 19 m  UMa    0.4   16. p eF,  S,  v  dif
 3368   Gx 10 46.8   +11 49 s  Leo    7.1    9.2   vB,  vL,  lE,  vsvmbM,  r;  =  M96
I 640      10 46.8   +34 45 d  LMi                vF,  pS,  E,  D  ?
 3371    * 10 47.0   +13 48 r  Leo                eF,  R,  2nd  of  3
 3375   Gx 10 47.0   -09 57 r  Sex          13. p F,  S,  R,  gmbM
 3370   Gx 10 47.1   +17 16 s  Leo    3.1   12. p cB,  pL,  vlE,  gbM,  r
I2601   Gx 10 47.1   +72 18 z  UMa          15. p eF,  pS,  sev  eF  st  inv
 3348   Gx 10 47.2   +72 50 s  UMa    2.2   11.2   B,  S,  ilE,  psbM,  *11  282deg  ,  21s
 3373    * 10 47.2   +13 40 r  Leo                F,  R,  3rd  of  3
 3383   Gx 10 47.3   -24 27 r  Hya          13. p F,  pL,  iR,  glbM
 3376   Gx 10 47.4   +06 03 r  Sex          14. p vF,  S
 3377   Gx 10 47.7   +13 59 s  Leo    4.4   10.2   vB,  cL,  lE,  svmbMBN
 3379   Gx 10 47.8   +12 35 s  Leo    4.5    9.3   vB,  cL,  R,  psbM,  r;  =  M105
I 641      10 47.8   +34 40 d  LMi                vS,  pS,  dif
 3374   Gx 10 47.9   +43 10 r  UMa          14. p vF,  cS,  iR
 3390   Gx 10 48.1   -31 32 s  Hya    4.0   12.2   F,  S,  pmE  0deg
 3450   Gx 10 48.1   -20 51 s  Hya    2.7   14. p vF,  L,  R,  vglbM,  r
I 642   Gx 10 48.1   +18 11 u  Leo    1.6   14. p vF,  pS,  lE,  2  st  f
 3380   Gx 10 48.2   +28 36 s  LMi    1.9   14. p pB,  pS,  R,  sbM
 3385   Gx 10 48.2   +04 55 r  Sex          13. p vF,  S,  R,  s  of  2
 3386   Gx 10 48.2   +05 00 r  Sex          15. p vF,  S,  lE,  bM,  n  of  2
 3387   Gx 10 48.2   +05 00 r  Sex          15. p eF,  eS
 3384   Gx 10 48.3   +12 38 s  Leo    5.9   10.0   vB,  L,  R,  psmbM,  2nd  of  3
 3388    - 10 48.3   +08 36 r  Leo                F,  R
 3393   Gx 10 48.3   -25 10 r  Hya          13. p F,  S,  R,  psbM,  2  st  10  f
 3381   Gx 10 48.4   +34 42 s  LMi    2.4   13. p pF,  cL,  iR,  vglbM,  1st  of  3
I2603    * 10 48.4   +32 56 x  LMi                vF,  pL,  biN  or  D  pf,  bf
 3364   Gx 10 48.5   +72 25 s  UMa    1.9   14. p vF,  L,  R,  vgbM,  r,  D*  sf
 3382    - 10 48.5   +36 44 r  LMi                F,  S,  iR;  S  Cl?
 3389   Gx 10 48.5   +12 32 s  Leo    2.7   11.8   F,  L,  E  pf,  vglbM,  3rd  of  3
 3391   Gx 10 48.9   +14 13 r  Leo          13. p F,  S,  R,  bet  2  st,  nr
 3399   Gx 10 49.4   +16 13 r  Leo          14. p F,  vS
I 643   Gx 10 49.4   +12 13 z  Leo          15. p pF,  S,  E  ns,  lbM
I2604   Gx 10 49.4   +32 47 v  LMi    1.4          F,  cS,  dif
 3405   Gx 10 49.7   +16 14 r  Leo          14. p F,  eS,  alm  stell,  close  to  S*
 3395   Gx 10 49.8   +32 59 s  LMi    1.9   12.1   cB,  pS,  ilE,  1st  of  2
I2605    ? 10 49.8   +32 58 x  LMi                eF,  S,  0'.3  ssp  3395
 3396   Gx 10 49.9   +32 59 s  LMi    2.8   12.2   pB,  pS,  ilE,  2nd  of  2
 3402   Gx 10 50.0   -12 40 r  Hya                F,  R
 3420   Gx 10 50.1   -17 15 r  Hya          14. p eF,  vS,  R,  pgbMN,  *8.5  s  6'
 3409   Gx 10 50.2   -17 03 r  Hya          15. p eF,  S,  E  200deg  ,  2  vF  st  inv
I 645      10 50.2   -06 03 d  Sex                F,  S,  R
 3404   Gx 10 50.3   -12 07 s  Hya    2.6   14. p pB,  vL,  E  pf;  =  IC  2609?
 3411   Gx 10 50.3   -12 51 r  Hya          13. p F,  S,  R,  lbM
I2606   Gx 10 50.3   +37 57 z  LMi          15. p F,  S,  E  ns,  dif
I2607   Gx 10 50.3   +38 00 m  LMi    0.7   15. p vF,  vS,  vlbM,  diffic
I2608   Gx 10 50.3   +32 46 x  LMi                F,  vS,  R,  *14  att
I2609      10 50.3   -12 06 x  Hya                vf,  S,  bM;  =  3404
 3401    - 10 50.4   +05 48 r  Sex                eF  (not  verified)
 3394   Gx 10 50.6   +65 43 r  UMa          13. p cF,  S,  lE,  vgbM
I 647      10 50.6   -12 52 d  Hya                eF,  vS,  dif,  3411  p
I 650      10 50.7   -13 27 d  Hya                pF,  vS,  R
 3400   Gx 10 50.8   +28 28 s  LMi    1.4   14. p pF,  S,  R,  bM
 3421   Gx 10 50.8   -12 27 r  Hya          14. p F,  R
 3412   Gx 10 50.9   +13 25 s  Leo    3.6   10.6   B,  S,  lE  135deg  +/-  ,  smbMN
 3429   Gx 10 50.9   +09 15 r  Leo                pF,  R
I 649   Gx 10 50.9   +01 11 m  Sex    0.6   15. p F,  S,  lbM,  *10.5  sp
 3392   Gx 10 51.0   +65 46 r  UMa          15. p vF,  S,  psbM,  st  nr
 3417   Gx 10 51.0   +08 29 r  Leo          15. p eF,  vS,  alm  stell
I 648   Gx 10 51.0   +12 17 m  Leo    0.8   15. p eF,  vS,  vF*  inv,  diffic
I 651   Gx 10 51.0   -02 08 v  Sex    0.8          pB,  pS,  gbM,  r
I 652      10 51.0   -12 38 d  Hya                F,  vS,  R,  bM
 3422   Gx 10 51.1   -12 24 r  Hya          15. p F,  R,  only  susp
 3423   Gx 10 51.2   +05 50 s  Sex    3.9   11.2   F,  vL,  R,  vgbM,  rr
 3431   Gx 10 51.2   -17 01 r  Crt          14. p eF,  S,  E  130deg  ,  gbM
 3413   Gx 10 51.3   +32 46 s  LMi    2.4   13. p F,  S
 3414   Gx 10 51.3   +27 59 s  LMi    3.6   10.8   B,  pL,  R,  mbM
 3418   Gx 10 51.3   +28 07 u  LMi    1.2   14. p cF,  S,  R,  bM
 3419   Gx 10 51.3   +13 57 s  Leo    1.1   13. p F,  vS,  R,  alm  stell,  S*  vnr
 3425   Gx 10 51.4   +08 34 r  Leo          14. p eF,  eS,  R
 3427   Gx 10 51.4   +08 18 r  Leo          14. p neb,  no  descr
 3428   Gx 10 51.4   +09 17 r  Leo          14. p vF,  S,  lE,  glbM
 3398   Gx 10 51.5   +55 23 v  UMa    1.3          vF,  S,  E,  er
I 644   Gx 10 51.5   +55 23 x  UMa                eeF,  pS,  lE,  B*  sf,  sp  of  2
 3426   Gx 10 51.6   +18 28 r  Leo          14. p pF,  S,  R,  D*  n
I 646   Gx 10 51.6   +55 28 x  UMa                eeF,  pS,  R,  nf  of  2
 3415   Gx 10 51.7   +43 43 s  UMa    2.4   13. p pB,  S,  vlE,  stell,  3  S  st  nr
 3416   Gx 10 51.7   +43 46 r  UMa          15. p eF  (F*?),  n  of  3415
 3406   Gx 10 51.8   +51 02 r  UMa          13. p pB,  R,  pgbM
 3424   Gx 10 51.8   +32 54 s  LMi    3.0   13. p pF,  pL,  lE,  sp  of  3
 3410   Gx 10 51.9   +51 01 r  UMa          15. p F,  pS,  dif,  2'  sf  3406
 3434   Gx 10 52.0   +03 48 r  Leo          13. p F,  pS,  R,  vglbM
 3433   Gx 10 52.1   +10 09 s  Leo    3.5   12. p vF,  vL,  R,  vgbM
 3446   OC 10 52.1   -45 09 A  Vel                Cl,  pL,  P,  lC,  iF,  st  9...13
 3408   Gx 10 52.2   +58 26 s  UMa    1.0   14. p vF,  cS,  R,  2  pB  st  s
 3430   Gx 10 52.2   +32 57 s  LMi    3.9   11.5   pB,  L,  iE,  gbM,  2nd  of  3
I 653   Gx 10 52.2   -00 33 u  Leo    2.3   14. p F,  S,  R,  dif
I2610    ? 10 52.2   +33 04 x  LMi                vF,  S,  lbM,  *  25"  p
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 3407   Gx 10 52.3   +61  23 s   UMa     1.7   15.  p vF,  vS,  R,  vS* nr
 3438   Gx 10 52.4   +10  34 r   Leo             14.  p vF,  eS,  alm  stell
 3439   Gx 10 52.4   +08  34 r   Leo             15.  p eeF,  vS,  alm stell
 3432   Gx 10 52.5   +36  37 s   LMi     6.2   11.3   pB,  pL,  vmE  40deg  , **   close  sp
 3441   Gx 10 52.5   +07  14 r   Leo             14.  p pB
 3437   Gx 10 52.6   +22  56 s   Leo     2.6   13.  p pB,  pL,  lE  120deg  , gbM
I2611    * 10 52.7   +10  07 x   Leo                  eF
 3449   Gx 10 52.9   -32  56 s   Ant     2.6   13.  p F,  S,  R,  *6- 7 sf
 3443   Gx 10 53.0   +17  34 s   Leo     2.5   14.  p eeF,  vS,  R
 3444   Gx 10 53.0   +10  13 v   Leo     1.2          eF,  vS,  pmE
 3442   Gx 10 53.1   +33  55 s   LMi     0.7   13.  p F,  vS,  R,  mbM,  r?
 3447   Gx 10 53.4   +16  46 s   Leo     3.8   13.  p eF,  vL,  vgvlbM,  B **   sp
I2612   Gx 10 53.6   +32  46 x   LMi                  F,  S,  R,  dif
 3453   Gx 10 53.7   -21  47 r   Hya                  F,  S,  R,  bM
 3403   Gx 10 53.9   +73  41 s   Dra     3.1   13.  p pF,  L,  iE,  vgbM
 3440   Gx 10 53.9   +57  07 s   UMa     2.3   14.  p vF,  S,  lE
I 654    10 53.9   -11  44 d   Crt                  vF,  S,  diffic
 3452   Gx 10 54.1   -11  24 r   Crt             15.  p eF,  R,  n of  S*
 3456   Gx 10 54.1   -16  02 s   Crt     2.1   13.  p eF,  att  to  *12  f
 3397    - 10 54.2   +77  17 r   Dra                  cB,  vS,  iF;  = 3329?
I2613    10 54.3   +32  58 x   LMi                  B,  pL,  E  200deg  , gmbM  dif  N;  = 3430
 3451   Gx 10 54.4   +27  14 r   LMi             13.  p F,  pL,  vlE,  vlbM
I 655   Nb 10 54.4   -00  22 x   Leo     1.           eF,  iF
 3454   Gx 10 54.5   +17  21 s   Leo     2.2   14.  p pF,  lE,  np  of  2
 3455   Gx 10 54.5   +17  17 s   Leo     2.8   13.  p pF,  S,  E,  gbM,  r,  sf  of  2
 3445   Gx 10 54.6   +56  59 s   UMa     1.6   12.4   cB,  pL,  iR,  vglbM,  *10  nf  2'
 3448   Gx 10 54.7   +54  19 s   UMa     5.4   11.7   B,  pL,  mE  67deg  , gbM
 3457   Gx 10 54.7   +17  37 r   Leo             13.  p 2 or  3 S st  and  neb
 3459   Gx 10 54.7   -17  04 r   Crt             14.  p vF,  S,  E,  gbM
 3464   Gx 10 54.7   -21  04 s   Hya     2.8   13.  p eF,  pL,  E  125deg
 3435   Gx 10 54.8   +61  18 r   UMa             14.  p cF,  pS,  lE,  vgbM
 3460    10 54.8   +17  36 A   Leo                  pB,  R,  no  * nr;  = 3457
 3461   Gx 10 54.9   +17  39 r   Leo                  F neb  5' nf  3460
 3463   Gx 10 55.1   -26  07 r   Hya             14.  p F,  S,  R,  glbM
I 656   OC 10 55.1   +17  36 x   Leo                  vS,  Cl,  neb?
 3462   Gx 10 55.3   +07  42 r   Leo             13.  p vF,  vS,  vlE,  psbM
 3458   Gx 10 56.0   +57  07 s   UMa     1.7   13.  p vB,  vS,  R,  stellar
 3466   Gx 10 56.3   +09  45 s   Leo     1.3   15.  p vF,  *9  90deg  , p of  2
 3467   Gx 10 56.7   +09  46 r   Leo             14.  p vF,  R,  vsmbM  *12,  f  of  2
 3469   Gx 10 56.9   -14  18 r   Crt             14.  p eeF,  S
 3472    - 10 57.3   -19  38 r   Crt                  eF,  S,  R,  gbM
 3468   Gx 10 57.4   +40  57 r   UMa             14.  p F,  eS,  R,  bM
I 657    10 57.9   -04  54 d   Leo                  F,  pS,  lE  ns
 3473   Gx 10 58.0   +17  07 r   Leo             15.  p vF,  E,  bet  2 st
 3474   Gx 10 58.1   +17  05 r   Leo             15.  p vF,  pS,  R,  s of  3473
 3476   Gx 10 58.1   +09  17 r   Leo             15.  p eF,  vS,  alm  stell
I 659    10 58.1   -06  16 d   Leo                  F,  S,  R,  bM
 3477   Gx 10 58.2   +09  13 r   Leo             15.  p eeF,  eS,  stell
 3475   Gx 10 58.3   +24  14 r   Leo             14.  p vF,  R,  gbM,  *13  1' n  (2'  s?)
I 658   Gx 10 58.3   +08  15 m   Leo     0.3   15.  p F,  vS,  R,  stellar
I 660   Gx 10 58.5   +01  23 z   Leo             16.  p vF,  S,  r
 3482   Gx 10 58.6   -46  35 c   Vel     2.0          eF,  S,  R,  gbM
 3470   Gx 10 58.7   +59  31 s   UMa     1.7   14.  p vF,  S,  R,  vgbM
 3479   Gx 10 58.9   -14  58 r   Crt             13.  p eF,  pS,  E  90deg  , gbMN
 3480    - 10 58.9   +09  21 r   Leo                  S,  stellar
I 661   Gx 10 58.9   +01  40 z   Leo             16.  p eF,  vS,  R,  diffic
 3483   Gx 10 59.0   -28  28 r   Hya             13.  p pF,  S,  R,  bM,  am  st
 3471   Gx 10 59.1   +61  32 s   UMa     2.0   13.  p vF,  S,  R,  bM
 3465   Gx 10 59.3   +75  12 r   Dra             14.  p eF,  pL,  R,  vglbM,  **   nf
I 662   Gx 10 59.4   +01  36 z   Leo             16.  p vF,  SN,  diffic
 3478   Gx 10 59.5   +46  07 s   UMa     2.8   13.  p eF,  S,  R
 3481   Gx 10 59.5   -07  31 r   Crt             14.  p eF,  vS,  rr,  prob  vF  Cl,  *9  5'  sf
 3496   OC 10 59.8   -60  20 s   Car     9.     8.2   Cl,  pL,  pRi,  lC,  st  13
 3490   Gx 10 59.9   +09  22 r   Leo             15.  p vF,  S
 3485   Gx 11 00.0   +14  50 s   Leo     2.5   13.  p F,  L,  R,  glbM,  r
 3489   Gx 11 00.3   +13  54 s   Leo     3.7   10.3   vB,  pL,  lE  80deg  +/-  , smbMN
I2621   Pl 11 00.3   -65  15 s   Car     0.1          PN  , stell,  10.5m
 3486   Gx 11 00.4   +28  58 s   LMi     6.9   10.3   cB,  cL,  R,  gmbM
I 665    11 00.5   -13  52 d   Crt                  F,  vS,  R,  bM
 3491   Gx 11 00.6   +12  10 r   Leo             14.  p eF,  cS,  R,  bMN
I 663   Gx 11 00.6   +10  27 z   Leo             16.  p eF,  vS,  R,  2 st  s,  1st  of  4
 3487   Gx 11 00.7   +17  35 r   Leo             14.  p eeF,  pS,  R,  v  diffic
I 664   Gx 11 00.7   +10  33 m   Leo     1.0   15.  p eF,  vS,  R,  lbM,  3492  f
 3492   Gx 11 00.9   +10  30 r   Leo             14.  p pF,  S,  *9.5  p  20s  , 1'  s
 3494    - 11 01.2   +03  43 r   Leo                  vS,  3495  6'  s
 3495   Gx 11 01.3   +03  38 s   Leo     4.6   13.  p vF,  pL,  mE
 3503   Nb 11 01.3   -59  51 s   Car     3.           3 S st  10  in  vF  neb
I 666   Gx 11 01.3   +10  29 z   Leo             15.  p eF,  vS,  iF,  4th  of  4
 3488   Gx 11 01.4   +57  41 s   UMa     2.0   14.  p eF  or  cB,  vlE,  pS,  *13  s  att
 3497    - 11 01.4   -19  28 r   Crt                  vF,  vS,  iR,  glbM;  = 3528?
 3493   Gx 11 01.5   +27  44 r   LNi             15.  p vF,  R,  bM,  * sp
I2614    11 01.6   +38  48 d   UMa                  vF,  vS,  R
 3500   Gx 11 01.7   +75  13 A   Dra             15.  p vF  &  eF,  Dneb,  v  near
 3498  *** 11 01.9   +14  23 r   Leo                  eF,  pL
I2615    11 02.0   +37  56 d   UMa                  F,  vS,  R,  lbM
I2618    11 02.0   +27  46 d   LNi                  vS  neb?
 3502   Gx 11 02.1   -14  08 r   Crt             14.  p eF,  pL,  iR,  glbM
I2616   Gx 11 02.2   +38  46 m   UMa     0.2   15.  p F,  S,  R,  gbM,  r
I2617   Gx 11 02.2   +38  39 m   UMa     0.8   15.  p F,  S,  R,  FN
I2619   Gx 11 02.2   +37  57 z   UMa             16.  p F,  vS,  R  stell
I2620   Gx 11 02.3   +38  30 u   UMa     1.1   15.  p F,  S,  R,  N,  r
 3505    - 11 02.7   -15  29 r   Crt                  pF,  S,  R,  glbM,  *14  nr
 3523   Gx 11 02.8   +75  08 r   Dra             14.  p F,  pL,  lbM  (place  doubtful)
 3501   Gx 11 02.9   +17  59 s   Leo     3.7   13.  p vF,  mE  ns,  gbM,  3'  long
 3508   Gx 11 02.9   -16  18 r   Crt             14.  p F,  S,  bM,  * 0'.5  nf
 3484    - 11 03.0   +75  49 r   Dra                  very  doubtful  object
 3499   Gx 11 03.2   +56  13 s   UMa     1.0   14.  p vF,  vS,  stellar
 3504   Gx 11 03.2   +27  58 s   LNi     2.7   11.1   B,  L,  E,  mbMN,  rr,  p of  2
 3506   Gx 11 03.2   +11  05 s   Leo     1.3   13.  p vF,  cS,  R,  vgvlbM
 3511   Gx 11 03.4   -23  05 s   Crt     5.4   12.  p vF,  vL,  mE
 3507   Gx 11 03.5   +18  08 s   Leo     3.5   11.  p cF,  pL,  R,  sbMS  *,  *9  att  25deg
I2622    11 03.5   -16  14 d   Crt                  eeF,  eS,  like  D*
 3510   Gx 11 03.7   +28  53 s   LMi     3.8   12.9   F,  L,  cE,  *7,  310deg  , 8'
 3513   Gx 11 03.8   -23  15 s   Crt     2.8   12.  p vF,  vL,  mE
I2623    11 03.8   -20  06 d   Crt                  vF,  vS
 3514   Gx 11 03.9   -18  49 r   Crt             13.  p vF,  pL,  R,  vgvlbM
 3512   Gx 11 04.0   +28  02 s   LNi     1.7   12.4   F,  pS,  R,  pgbN,  f  of  2
 3519    - 11 04.0   -61  22 r   Car                  Cl,  pRi,  pC
 3518   Gx 11 04.3   -06  28 r   Leo                  eF,  eS,  lE
 3509   Gx 11 04.4   +04  50 s   Leo     2.3   14.  p eF,  S,  lE?
 3515   Gx 11 04.6   +28  14 s   LNi     1.1   15.  p vF,  S,  R,  sev  eF  st  inv
 3520  Ast 11 05.5   -17  56 F   Crt                  eF,  vS,  iR,  gbM,  sev  vF  st  inv
 3517   Gx 11 05.6   +56  31 s   UMa     1.2   14.  p eF,  S,  R,  vgbM
 3521   Gx 11 05.8   -00  02 s   Leo     9.5    8.9   cB,  cL,  mE  140deg  +/-  , vsmbMN
 3525    - 11 06.4   -19  27 r   Crt                  F,  pS,  gbMN
 3532   OC 11 06.4   -58  40 s   Car    55.     3.0   !!,  Cl,  eL,  R,  lC,  st  8...12
 3524   Gx 11 06.5   +11  24 r   Leo             13.  p F,  S,  lE,  psbM,  2 st  np  in  line
I 667   Gx 11 06.5   +15  05 z   Leo             15.  p vF,  vS,  R,  vlbM
 3522   Gx 11 06.6   +20  04 r   Leo             14.  p pF,  vS,  lE
I 668   Gx 11 06.6   +15  02 m   Leo     0.6   15.  p vF,  vS,  R,  bM
 3516   Gx 11 06.8   +72  34 s   UMa     2.3   11.6   pB,  vS,  iR,  psmbM  *
 3531    11 06.9   +07  10 D   Leo                  E  50deg  , *11  at  sp  end;  = 3526
 3526   Gx 11 07.0   +07  10 r   Leo             13.  p eF,  vmE  50deg  +/-
 3533   Gx 11 07.2   -37  10 v   Cen     2.6          eeF,  vS*  att
 3527   Gx 11 07.3   +28  32 r   UMa             15.  p eF,  S,  *10  p  60"
 3528   Gx 11 07.3   -19  28 c   Crt     3.0          F,  S,  R,  pslbM,  p  of  2
 3529   Gx 11 07.3   -19  33 c   Crt     1.5          eF,  S,  R,  vlbM,  f  of  2
I 669   Gx 11 07.3   +06  18 u   Leo     1.6   14.  p pB,  vS,  R,  sbM
I2624   Gx 11 07.3   -19  28 c   Crt     3.0          cB,  pS,  R,  n of  2;  = 3528
I2625   Gx 11 07.3   -19  33 c   Crt     1.5          eeF,  vS,  R,  s of  2;  = 3529
I 670   Gx 11 07.4   +06  43 u   Leo     1.3   15.  p F,  pS,  R,  bM
I 671   Gx 11 07.6   +00  47 u   Leo     1.6   15.  p vF,  pS,  R
I 672   Gx 11 08.0   -12  29 m   Crt     0.5   15.  p vF,  vS
 3535   Gx 11 08.5   +04  50 r   Leo             14.  p cF,  vS,  R,  bM,  r
 3537   Gx 11 08.6   -10  26 r   Crt             14.  p vF,  S,  vF  st  inv
 3530   Gx 11 08.7   +57  14 r   UMa             14.  p vF,  S,  R,  pgbM
 3534   Gx 11 08.7   +26  36 r   Leo             15.  p vF,  *9  np  3'
 3536   Gx 11 08.8   +28  29 r   UMa             15.  p F,  S,  R,  bM
 3541   Gx 11 08.8   -10  56 r   Crt             15.  p nebulous  *
I2626   Gx 11 09.0   +26  55 z   Leo             16.  p F,  vS,  dif,  diffic
 3539   Gx 11 09.1   +28  40 r   UMa             15.  p eF
 3540   Gx 11 09.3   +36  01 r   UMa             14.  p vF,  R,  psbM,  *7  p  7'
I 673    11 09.5   -00  05 d   Leo                  vF,  vS,  E  pf,  r
 3551   Gx 11 09.6   +21  43 r   Leo             15.  p eeF,  vS,  R,  sp  of  2
 3555   Gx 11 09.7   +21  44 r   Leo             15.  p vF,  R,  nf  of  2
 3546   Gx 11 09.8   -13  23 r   Crt             14.  p neb*  12,  *12  2'  nf
I2631    11 09.8   -76  37 d   Cha                  *9  in  L  neb
 3547   Gx 11 09.9   +10  43 s   Leo     2.2   12.8   F,  S,  lE,  vlbM
 3565    - 11 09.9   -20  02 r   Crt                  vF,  vS,  R,  gbMN,  1st  of  2
 3566    - 11 09.9   -20  02 r   Crt                  eeF,  eS,  R,  gbM,  2nd  of  2
I2627   Gx 11 09.9   -23  44 s   Crt     2.7   12.0   eF,  L,  R,  stell  N
 3542   Gx 11 10.0   +36  57 r   UMa             15.  p vF,  S,  irrR,  lbM,  r
 3557   Gx 11 10.0   -37  32 s   Cen     4.0   10.4   B,  S,  R,  pgmbM,  1st  of  3
 3545   Gx 11 10.2   +36  58 r   UMa             15.  p vF,  vS,  irrR,  lbM,  r
 3548    - 11 10.4   +36  02 r   UMa                  eF,  S,  *8,  p;  = 3540?
 3572  C+N 11 10.4   -60  14 s   Car    20.     6.6   Cl,  pRi,  lC
 3550   Gx 11 10.6   +28  46 s   UMa     1.4   14.  p F  (var?),  S,  R,  bM,  *9  f  1',  1st  of  4
 3552   Gx 11 10.6   +28  42 r   UMa             15.  p eF,  vS,  2nd  of  4
 3553   Gx 11 10.6   +28  42 r   UMa             15.  p eF,  vS,  forms  Dneb  with  3552
 3564   Gx 11 10.6   -37  33 s   Cen     2.1   12.2   pF,  S,  R,  bM,  2nd  of  3
 3554   Gx 11 10.7   +28  40 r   UMa             15.  p vF,  pS,  R,  bM,  3rd  of  4
 3559   Gx 11 10.7   +12  01 s   Leo     1.5   14.  p eF,  pS,  lE,  r
 3560    * 11 10.7   +11  11 r   Leo                  F,  S,  R,  gbM
I 675    11 10.7   +03  41 d   Leo                  pB,  pL,  E  ns,  biN?
 3543   Gx 11 10.8   +61  22 r   UMa             15.  p eF,  vS,  E  0deg  +/-  , r
 3568   Gx 11 10.8   -37  27 v   Cen     2.4          vF,  pL,  R,  * inv,  3  B  st  nr,  3rd  of  3
 3549   Gx 11 10.9   +53  23 s   UMa     3.2   12.  p cB,  cL,  cE  160deg
 3558   Gx 11 10.9   +28  33 s   UMa     1.3   15.  p pF,  S
I 674   Gx 11 11.1   +43  38 u   UMa     1.8   14.  p pF,  R,  bM,  D*  sf
 3561   Gx 11 11.2   +28  43 s   UMa     1.1   15.  p vF,  pL,  4th  of  4
 3567   Gx 11 11.3   +05  50 r   Leo             14.  p eF,  R,  sbM,  r
 3573   Gx 11 11.3   -36  51 r   Cen                  eF,  S,  R,  glbM,  3  st  11  f
 3563   Gx 11 11.4   +26  58 s   Leo     1.4   15.  p pF,  pL,  *8  2'  n
 3538    - 11 11.5   +75  34 r   Dra                  vF,  pL,  *17  nr
 3544   Gx 11 11.5   -18  17 c   Crt                  vF,  L,  mE  95deg  , bM;  = 3571
 3556   Gx 11 11.5   +55  40 s   UMa     0.3   10.1   cB,  vL,  vmE  79deg  , pbM,  r;  = M108
 3571   Gx 11 11.5   -18  17 s   Crt     3.3   13.  p pF,  pL,  iF,  bM
I2628   Gx 11 11.6   +12  08 z   Leo             15.  p pF,  pS,  R,  bM,  spir
 3576   Nb 11 11.8   -61  23 d   Car    20.           F,  lE,  1st  of  6
 3579   Nb 11 11.9   -61  14 d   Car                  F,  lE,  sbM,  2nd  of  6
 3569   Gx 11 12.1   +35  27 r   UMa             14.  p F,  vS,  stell
 3570   Gx 11 12.1   +27  35 s   Leo     1.3   15.  p vF,  vS,  R,  bM
 3581   Nb 11 12.1   -61  18 r   Car                  *12  with  fan- shaped  neb  att,  3rd  of  6
 3574   Gx 11 12.2   +27  37 v   Leo     0.5          eF
 3582   Nb 11 12.3   -61  16 r   Car                  B,  bM*,  4th  of  6
 3584   Nb 11 12.4   -61  12 r   Car                  F,  L,  E  0deg  , bM,  5th  of  6
 3586   Nb 11 12.6   -61  21 r   Car                  eF,  S,  E  160deg  +/-  , 6th  of  6
I2629    11 12.6   +12  06 d   Leo                  F,  S,  R,  bM
I 676   Gx 11 12.7   +09  04 u   Leo     2.2   13.  p vF,  pS,  lE,  bet  2  dist  st
I2630    11 12.7   +12  19 d   Leo                  F,  vS,  R,  spir
 3578    - 11 12.8   -15  57 r   Crt                  doubtful  object,  probably  a  neb
 3562   Gx 11 12.9   +72  53 r   Dra             13.  p pF,  pS,  lE,  gbM,  *15,  22deg  , 70"
 3590   OC 11 12.9   -60  47 s   Car    4.     8.2   Cl,  pRi,  C,  E
 3575    - 11 13.1   +22  40 r   Leo                  pB,  pL,  R,  *11  p
I2632    11 13.1   +11  40 d   Leo                  F,  S,  R,  bM
I2633    11 13.2   +11  36 d   Leo                  F,  cS,  iF
 3580   Gx 11 13.3   +03  40 r   Leo             14.  p vF,  *14  f
 3585   Gx 11 13.3   -26  45 s   Hya     2.9   10.0   B,  pL,  E,  vsmbMN,  2  B  st  triangle
I2634   Gx 11 13.5   +10  30 m   Leo     0.4   15.  p cB,  cS,  R,  gbM
I2635    11 13.5   +11  28 d   Leo                  F,  S,  stell  N
I2636    11 13.6   +11  27 d   Leo                  F,  S,  bM
 3577   Gx 11 13.8   +48  16 s   UMa     1.7   15.  p eF,  vS,  p of  2
I2637   Gx 11 13.8   +09  36 u   Leo     0.9   14.  p pB,  cS,  R,  bM
I 677   Gx 11 13.9   +12  19 u   Leo     1.6   14.  p F,  pL,  gbM
I2638   Gx 11 13.9   +10  34 u   Leo     1.1   15.  p cB,  pS,  E  100deg  , bM
I2639    11 13.9   +09  39 d   Leo                  F,  S,  R,  bM,  spir
 3588   Gx 11 14.0   +20  24 r   Leo             15.  p vF,  cS,  4s   f  delta  Leo  (&  8'  s)
 3591   Gx 11 14.1   -14  04 r   Crt             14.  p vF,  S,  iR,  lbM
I 678   Gx 11 14.1   +06  35 m   Leo     0.2   15.  p F,  S,  r,  N  =  13.5
I2640    11 14.1   +11  00 d   Leo                  F,  S,  iF
 3583   Gx 11 14.2   +48  19 s   UMa     2.8   12.  p pB,  pL,  R,  vgmbM
I2641    11 14.2   +09  24 d   Leo                  F,  S,  iF
I2642    11 14.2   +10  16 d   Leo                  vF,  vS,  R,  bM,  spir
 3592   Gx 11 14.4   +17  16 s   Leo     2.0   15.  p eF,  S,  pmE  60deg
I2643    11 14.5   +10  08 d   Leo                  cF,  S,  R,  bM
I2644    11 14.5   +10  46 d   Leo                  F,  S,  R
I2645   Gx 11 14.5   +11  54 z   Leo             16.  p pF,  S,  R,  bM
 3593   Gx 11 14.6   +12  49 s   Leo     5.8   11.0   B,  cL,  E  90deg  +/-  , psmbM
 3597   Gx 11 14.6   -23  43 r   Crt             13.  p vF,  pS,  R,  bM
I2646    11 14.6   +12  32 d   Leo                  vF,  vS,  iF
I2647    11 14.7   +12  09 d   Leo                  eF,  pL,  iF
I2648   Gx 11 14.7   +10  14 z   Leo             16.  p cF,  cS,  R,  bM
 3587   Pl 11 14.8   +55  01 s   UMa     3.2   11.2   !!,  PN  , vB,  vL,  R,  vvg,  vsbM,  150"  d;  =
    M97
I2649   Gx 11 14.8   +11  08 m   Leo     0.6   15.  p pB,  S,  R,  bM,  spir
I2650    11 14.9   +13  51 d   Leo                  F,  S,  bM,  iF
I2651    11 14.9   +12  15 d   Leo                  F,  S,  R,  bM
I2652    11 14.9   +12  27 d   Leo                  vF,  S,  R,  bM,  spir
I2653    11 14.9   +10  33 d   Leo                  vF,  S,  R
 3596   Gx 11 15.1   +14  47 s   Leo     4.2   12.  p pF,  L,  R,  glbM
 3603  C+N 11 15.1   -61  15 s   Car    12.     9.1   glob.  cl.   and  neb,  st  15...18
I2654    11 15.1   +12  30 d   Leo                  vF,  S,  E  120deg
I2655    11 15.1   +12  10 d   Leo                  eF,  S,  iF
I2656    11 15.1   +12  23 d   Leo                  vF,  S,  iF,  E  120deg
 3589   Gx 11 15.2   +60  42 s   UMa     1.7   15.  p vF,  L,  E,  vgbM,  in  triangle  of  L  st
 3598   Gx 11 15.2   +17  16 r   Leo             13.  p F,  vS,  stell,  * n
I2657    11 15.2   +13  42 d   Leo                  F,  pL,  dif,  bet  2  st
I2658    * 11 15.2   +13  00 x   Leo                  vF,  cS,  R,  bM
 3595   Gx 11 15.4   +47  27 s   UMa     1.7   13.  p vF,  vS,  vlE,  stellar,  cB*  n
 3599   Gx 11 15.4   +18  07 s   Leo     2.8   11.9   B,  pS,  R,  pgmbM
 3601   Gx 11 15.5   +05  07 r   Leo             14.  p vF,  pS,  alm  stell
I2659    * 11 15.5   +12  53 x   Leo                  F,  vS,  R,  bM,  spir
I2660    11 15.5   +12  26 d   Leo                  vF,  S
I2661   Gx 11 15.5   +13  37 z   Leo             15.  p F,  pS,  E  100deg  , bM
I2662    * 11 15.5   +12  46 x   Leo                  F,  vS,  R,  bM
I2668   Gx 11 15.5   -14  11 m   Crt     1.0   14.  p eF,  S
I2663    * 11 15.6   +12  36 x   Leo                  pB,  vS,  R,  sbM  *
I2664    * 11 15.6   +12  34 x   Leo                  F,  vS,  lE  80deg  ,  bM
I2665    11 15.7   +11  43 d   Leo                  vF,  pL,  iF,  N,  2  st  13  att
I2666   Gx 11 15.7   +13  47 m   Leo     0.7   15.  p cB,  cS,  E  20deg  ,  bM
I2667    11 15.7   +12  07 d   Leo                  F,  vS,  R,  bM,  spir
 3600   Gx 11 15.8   +41  36 s   UMa     4.3   12.  p pF,  S,  lE  0deg  +/-  , vgbM
 3602   Gx 11 15.8   +17  25 r   Leo             15.  p eeF,  vS,  alm  stell
I2669    11 15.9   +13  26 d   Leo                  F,  S,  E  50deg  ,  bM
I2670    11 16.0   +11  47 d   Leo                  F,  vS,  R,  bM,  spir
 3594   Gx 11 16.1   +55  42 r   UMa             15.  p vF,  vS,  stellar
 3620   Gx 11 16.1   -76  13 c   Cha     2.8          F,  pS,  pmE,  gbM
I2671    11 16.1   +13  08 d   Leo                  F,  vS,  R,  bM
I2672    11 16.1   +10  10 d   Leo                  F,  vS,  R,  bM
I2673    11 16.1   +10  10 d   Leo                  F,  pL,  iF,  N,  *11  f  1'
 3606   Gx 11 16.2   -33  49 r   Hya                  eF,  S,  R,  gbM
I2674   Gx 11 16.2   +11  03 u   Leo     1.4   15.  p F,  pS,  R,  bM,  spir
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I2675      11 16.2   +12  15  d  Leo                F, vS,  R
 3604    - 11 16.3   +04  31  r  Leo                pB,  S,  lE,  mbN;  = 3611?
I2676      11 16.3   +09  50  d  Leo                F,  S,  iF,  *11  sf  0'.5
I2677      11 16.3   +12  13  d  Leo                F,  vS,  R,  bM,  in  L,  E  neby
I2678      11 16.4   +11  57  d  Leo                F,  vS,  E  110deg  ,  bM
I2679      11 16.4   +12  01  d  Leo                F,  S,  R,  bM,  spir,  *13  sp  20"
I2680      11 16.4   +09  49  d  Leo                cF,  S,  iF,  N,  *11  np
I 679      11 16.6   -13  58  d  Crt                F,  S,  R,  sbM
I2681   Gx 11 16.6   +11  12  z  Leo          15.  p  cB,  vS
I2682      11 16.6   +09  25  d  Leo                pF,  S,  E,  bM
 3605   Gx 11 16.8   +18  01  s  Leo    1.7   13.  p  F,  S,  R,  sp  of  3
 3607   Gx 11 16.9   +18  03  s  Leo    3.7   10.0   vB,  L,  R,  vmbM,  2nd  of  3
I2683      11 16.9   +12  06  d  Leo                F,  pL,  iF,  N
 3608   Gx 11 17.0   +18  09  s  Leo    3.0   11.0   B,  pL,  R,  psbM,  3rd  of  3
I2684   Gx 11 17.0   +13  06  z  Leo          15.  p  F,  pS,  R,  bM
I2685      11 17.0   +10  06  d  Leo                F,  vS,  R,  sbM  *14
I2686      11 17.1   +12  57  d  Leo                F,  S,  iF,  att  *14  sf
I2687      11 17.2   +10  10  d  Leo                vF,  vS,  R,  bM,  spir
I2688      11 17.3   +13  29  d  Leo                vF,  S,  E  30deg  ,  bM
I2689      11 17.3   +12  58  d  Leo                F,  S,  E  40deg
I2690      11 17.4   +12  59  d  Leo                vF,  S,  iF,  diffic
I2691      11 17.4   +12  02  d  Leo                F,  S,  R,  mbM
 3611   Gx 11 17.5   +04  33  s  Leo    2.4   12.2   pF,  cS,  iR,  psmbM,  *10  np  3'
I2692      11 17.6   +10  46  d  Leo                F,  vS
I2693      11 17.6   +13  33  d  Leo                vF,  S,  R,  bM
I2694   Gx 11 17.6   +13  23  z  Leo          15.  p  pB,  S,  E  90deg  ,  bM
 3609   Gx 11 17.8   +26  38  r  Leo          14.  p  pF,  S,  bM
 3617   Gx 11 17.8   -26  07  r  Hya          13.  p  F,  S,  R,  gbM
I2695      11 17.8   +13  44  d  Leo                F,  S,  R,  bM
I2696      11 17.8   +12  45  d  Leo                F,  vS,  R,  bM
I2697      11 17.9   +13  24  d  Leo                F,  S,  iF,  N,  bet  2  st
I2698      11 17.9   +11  53  d  Leo                F,  pS,  iF,  biN
I2699      11 17.9   +11  55  d  Leo                F,  eS,  R,  bM
I2700      11 17.9   +12  03  d  Leo                vF,  vS,  iF,  N
I2714   OC 11 17.9   -62  42  s  Car   12.     8.  p  Cl,  pC
 3615   Gx 11 18.0   +23  24  r  Leo          14.  p  cF,  vS,  smbM,  stellar,  p  of  2
I 680   Gx 11 18.0   -01  56  m  Leo    0.6   15.  p  F,  S,  R,  gbM
I2701      11 18.0   +11  07  d  Leo                F,  vS,  iF
I2702      11 18.0   +09  25  d  Leo                vF,  S,  E
I2703   Gx 11 18.1   +17  39  x  Leo                vF,  S
I2704   Gx 11 18.1   +12  28  z  Leo          15.  p  F,  S,  E  70deg  ,  bM
I2705      11 18.1   +11  54  d  Leo                eF,  eS,  R,  bM,  diffic
 3612   Gx 11 18.2   +26  38  r  Leo          15.  p  pL,  dif,  *10-  11  nf  2'
 3616    - 11 18.2   +14  44  r  Leo                eF,  pL;  nonexistent?
 3614   Gx 11 18.3   +45  45  s  UMa    4.6   12.  p  F,  pL,  lE  90deg  +/-  ,  glbM,  r
 3621   Gx 11 18.3   -32  49  s  Hya   10.0   10.  p  cB,  vL,  E  160deg  ,  am  4  st
 3610   Gx 11 18.4   +58  47  s  UMa    3.2   10.8   vB,  pS,  lE  90deg  +/-  ,  vsvmbMSN
 3618   Gx 11 18.5   +23  29  r  Leo          14.  p  vF,  S,  f  of  2
I2706      11 18.5   +12  33  d  Leo                F,  vS,  E  60deg  ,  bM
I2707      11 18.5   +09  29  d  Leo                F,  vS,  R,  bM,  spir,  *13  sf
 3613   Gx 11 18.6   +58  00  s  UMa    3.6   12.  p  vB,  cL,  mE  305deg  ,  smbMN
I 681      11 18.6   -12  09  d  Crt                vF,  S,  iF,  diffic
I2708   Gx 11 18.6   +12  43  z  Leo          15.  p  pB,  vS,  R,  bM
I2709      11 18.7   +12  34  d  Leo                eF,  pL,  iF,  *13  n
 3624   Gx 11 18.8   +07  32  r  Leo          14.  p  eF
I2710      11 18.8   +13  34  d  Leo                B,  vS,  R,  bM
I2711      11 18.8   +13  44  d  Leo                F,  vS,  R,  bM
 3623   Gx 11 18.9   +13  05  s  Leo   10.0    9.3   B,  vL,  mE  165deg  +/-  ,  gbMBN;  = M65
I2712      11 18.9   +09  38  d  Leo                F,  vS,  R,  bM
I2713      11 19.2   +12  10  d  Leo                cF,  vS,  R,  bM
I2715      11 19.2   +11  57  d  Leo                vF,  S,  iF
I2716      11 19.3   +11  42  d  Leo                vF,  S,  iF
I2717      11 19.3   +12  03  d  Leo                vF,  vS,  R,  bM,  diffic
 3619   Gx 11 19.4   +57  46  s  UMa    3.1   13.  p  cB,  cL,  R,  vgmbM
I2718      11 19.4   +12  01  d  Leo                F,  vS,  iF
I2719      11 19.5   +12  04  d  Leo                vF,  S,  iF,  N
I2720      11 19.6   +12  05  d  Leo                cF,  vS,  R,  bM
I2721      11 19.7   +12  09  d  Leo                eF,  pS,  dif
I2722      11 19.7   +13  58  d  Leo                F,  S,  iF
I2723      11 19.8   +12  02  d  Leo                F,  vS,  E  200deg  ,  diffic
I2724      11 19.8   +10  43  d  Leo                cF,  vF,  R,  bM,  *13  p  20"
I2725      11 20.0   +13  26  d  Leo                vF,  S,  iF,  diffic
I2726    * 11 20.0   +13  25  x  Leo                vF,  vS,  iF,  diffic
I2727      11 20.0   +12  02  d  Leo                F,  vS,  iF,  N,  diffic
 3626   Gx 11 20.1   +18  21  s  Leo    3.1   10.9   B,  S,  vlE,  sbM
I2728    * 11 20.1   +13  25  x  Leo                vF,  S,  iF,  N,  diffic
I2729      11 20.1   +13  25  d  Leo                vF,  S,  iF,  diffic
I2730      11 20.1   +12  22  d  Leo                F,  eS,  E  90deg  ,  bM
 3622   Gx 11 20.2   +67  15  r  UMa          13.  p  pB,  S,  R,  gbM
 3627   Gx 11 20.2   +12  59  s  Leo    8.7    9.0   B,  vL,  mE  150deg  ,  mbM,  2  st  np;  = M66
I2731    * 11 20.2   +13  34  x  Leo                F,  S,  R,  bM,  spir
I2732      11 20.2   +12  24  d  Leo                vF,  S,  R,  bM
 3628   Gx 11 20.3   +13  36  s  Leo   14.8    9.5   pB,  vL,  vmE  102deg
 3630   Gx 11 20.3   +02  58  s  Leo    2.3   13.  p  pB,  S,  R,  smbMN
 3638   Gx 11 20.3   -08  06  r  Crt          15.  p  eF,  vS,  2  st  10  f
 3633   Gx 11 20.4   +03  35  s  Leo    1.4   14.  p  vF,  S,  R,  2  st  nr
 3636   Gx 11 20.4   -10  17  s  Crt    1.1   13.  p  F,  vS,  R,  lbM,  *7  f,  p  of  2
I2733   D* 11 20.4   +13  52  x  Leo                vF,  cS,  iF,  N,  *14  n
I2734      11 20.4   +12  27  d  Leo                F,  S,  iF,  N
 3625   Gx 11 20.5   +57  47  s  UMa    2.2   14.  p  F,  S,  lE  135deg  +/-
 3629   Gx 11 20.5   +26  58  s  Leo    2.2   13.  p  cF,  L,  R,  vgvlbM
 3632    - 11 20.5   +18  09  r  Leo                pB,  *  inv;  =  3626?
 3634   Gx 11 20.6   -09  01  r  Crt          15.  p  eF,  eS,  R,  bMN,  D  with  3635,  85deg  ,  dist
    0'.4
 3635   Gx 11 20.6   -09  01  r  Crt          16.  p  eF,  eS,  R,  bMN,  D  with  3634
 3637   Gx 11 20.7   -10  16  s  Crt    1.7   13.  p  F,  vS,  R,  psbM,  *7  p,  f  of  2
I2736      11 20.9   +12  25  d  Leo                vF,  S,  iF,  N
 3631   Gx 11 21.0   +53  10  s  UMa    4.6   10.4   pB,  L,  R,  svmbMrN
I2735   Gx 11 21.0   +34  21  u  UMa    1.2   15.  p  pB,  cS,  E  pF,  N,  r
 3640   Gx 11 21.1   +03  14  s  Leo    4.1   10.3   B,  pL,  R,  psbM
I2737      11 21.1   +14  18  d  Leo                F,  cS,  R,  bM
 3641   Gx 11 21.2   +03  12  s  Leo    1.1   14.  p  F,  vS,  alm  stell,  3640  2'  n
I 682      11 21.2   +20  13  d  Leo                eF,  eS,  R,  vF*  close  np
I2739      11 21.2   +11  55  d  Leo                F,  vS,  annular?
I2738   Gx 11 21.3   +34  22  v  UMa    0.6          F,  S,  R,  gbMN
I2740      11 21.3   +08  45  d  Leo                vF,  S,  dif,  diffic
I2741      11 21.3   +09  09  d  Leo                vF,  pS,  iF,  sev  N
I2742      11 21.3   +10  27  d  Leo                F,  S,  iF
 3643   Gx 11 21.4   +03  01  s  Leo    1.1   15.  p  eF,  vS
I 683   Gx 11 21.4   +02  45  x  Leo                neb  object  13.5m
I2743      11 21.4   +08  42  d  Leo                F,  vS,  R,  bM,  spir
 3639   Gx 11 21.5   +18  28  r  Leo          14.  p  pF,  S,  R,  vlbM,  15'  f  3626
 3644   Gx 11 21.5   +02  49  r  Leo          15.  p  vF,  vS;  =  IC  684
I2745   Gx 11 21.5   +13  26  z  Leo          15.  p  pB,  Sp,  E  70deg  ,  bM,  *12  att  sf
 3645   Gx 11 21.6   +02  59  r  Leo          15.  p  pB,  S,  E,  bM
 3647   Gx 11 21.6   +02  54  r  Leo          15.  p  eF  neb*
I 684      11 21.6   +02  50  x  Leo                F,  S,  **   sp  0'.5;  =  3644
I2746      11 21.6   +11  44  d  Leo                F,  vS,  R,  bM
 3646   Gx 11 21.7   +20  10  s  Leo    3.9   11.2   cF,  cL,  lE,  gbM,  sp  of  2
I2744   Gx 11 21.7   +34  22  m  UMa    0.4   15.  p  F,  S,  gbM,  r
I2747      11 21.7   +08  48  d  Leo                vF,  vS,  iF,  2  st  p
I2748      11 21.7   +08  48  d  Leo                F,  vS,  iF
I2749   Gx 11 21.7   +08  35  z  Leo          16.  p  F,  S,  dif  (D*?)
I2750      11 21.9   +09  40  d  Leo                vF,  vS,  iF
I2752   Nb 11 22.0   +14  08  x  Leo    0.3          F,  S,  R,  bM
I2753      11 22.0   +09  53  d  Leo                cF,  vS,  R,  bM
I2754   Nb 11 22.0   +14  09  x  Leo    0.5          F,  S,  iF,  N,  diffic
I2755    * 11 22.0   +13  48  x  Leo                F,  vS,  R,  bM
I2756      11 22.0   +09  58  d  Leo                vF,  vS,  E  120deg  ,  bM
I2757   Gx 11 22.0   +08  24  z  Leo          15.  p  F,  S,  iF,  N
I2758   Gx 11 22.0   +07  49  z  Leo          15.  p  F,  cS,  R,  bM,  diffic

I 685   Gx 11 22.1   +17  45  x  Leo                eeF,  pS,  R,  *  nf
I2751   Gx 11 22.1   +34  23  z  UMa          16.  p  F,  S,  R,  2  st  15  inv
 3649   Gx 11 22.2   +20  13  s  Leo    1.6   15.  p  vF,  pS,  R,  gbM,  nf  of  2
I2759      11 22.2   +24  19  d  Leo                cF,  stell,  *13  npp  2'.5
I2760      11 22.2   +12  40  d  Leo                vF,  S,  R,  bM
 3642   Gx 11 22.3   +59  05  s  UMa    5.8   11.1   pB,  pL,  R,  vgbM
I2761   Nb 11 22.3   +14  11  x  Leo    0.1          F,  S,  R,  bM,  diffic
I2762   Gx 11 22.3   +12  44  z  Leo          15.  p  cF,  pS,  mE  150deg  ,  bM,  *12  p
I2763      11 22.3   +13  04  d  Leo                cF,  pS,  E  95deg  ,  long  N
 3651   Gx 11 22.4   +24  18  r  Leo          14.  p  cF,  vS,  R,  bM,  np  of  2
I2765   Nb 11 22.4   +14  13  x  Leo    0.1          vF,  vS,  iF,  N
I2766      11 22.4   +12  54  d  Leo                vF,  S,  iF
I2767      11 22.4   +13  05  d  Leo                vF,  vS,  iF
I2768      11 22.4   +12  32  d  Leo                vF,  vS,  iF,  N
I2769   Nb 11 22.4   +14  12  x  Leo    0.1          F,  cS,  R,  bM
I2770      11 22.4   +09  13  d  Leo                F,  S,  iF
 3653   Gx 11 22.5   +24  16  r  Leo          15.  p  vF,  vS,  sf  of  2
I2771      11 22.5   +12  31  d  Leo                vF,  vS,  iF,  N,  diffic
I2772      11 22.5   +13  36  d  Leo                vF,  eS,  iF,  N
 3648   Gx 11 22.6   +39  53  r  UMa          13.  p  pB,  S,  pmE,  bMN  =  close  **  ?
 3650   Gx 11 22.6   +20  42  s  Leo    1.9   15.  p  eF,  S,  R,  bet  2  st
 3652   Gx 11 22.6   +37  46  s  UMa    2.4   13.  p  pF,  cL,  lE,  vgbM
I2773      11 22.6   +13  34  d  Leo                vF,  S,  viF,  diffic
I2774      11 22.6   +12  31  d  Leo                vF,  vS,  iF,  N,  diffic
I2775      11 22.7   +12  31  d  Leo                vF,  vS,  iF,  N,  diffic
I2776      11 22.7   +13  20  d  Leo                pF,  pS,  R,  bM,  spir
I2777   Gx 11 22.7   +12  02  z  Leo          15.  p  pF,  vS,  R,  bM
I2778      11 22.7   +12  31  d  Leo                vF,  vS,  iF,  N,  diffic
I2779      11 22.8   +13  21  d  Leo                cF,  eS,  R
I2780      11 22.8   +10  09  d  Leo                F,  vS,  R,  bM,  *15  n  15"
I2781      11 22.8   +12  21  d  Leo                F,  vS,  iF,  fainter  one  2'  nf
 3655   Gx 11 22.9   +16  35  s  Leo    1.6   11.6   pB,  pS,  iR,  bM,  r
I2782   Gx 11 22.9   +13  27  u  Leo    1.1   15.  p  cF,  cS,  R,  bM
I2783      11 22.9   +08  53  d  Leo                F,  vS,  R,  bM,  spir
I 686   Gx 11 23.1   +05  39  z  Leo          15.  p  eF,  vS,  R,  v  diffic
I2784      11 23.2   +13  07  d  Leo                pB,  eS,  R,  bM,  *13  p  20"
I2785      11 23.3   +13  23  d  Leo                pF,  S,  R,  bM
I2786      11 23.3   +13  23  d  Leo                cF,  S,  E  110deg  ,  bM
I2787   Gx 11 23.3   +13  39  u  Leo    1.0   15.  p  cF,  S,  R,  bM
I2788      11 23.4   +12  42  d  Leo                vF,  S,  R
I2789   D* 11 23.5   +14  11  x  Leo                pB,  S,  R,  bM
 3656   Gx 11 23.6   +53  51  s  UMa    1.7   13.  p  pB,  S,  R,  vgbM,  *12  p
 3660   Gx 11 23.6   -08  40  s  Crt    2.8   13.  p  F,  pL,  iR,  vgbM
I 689      11 23.6   -13  50  x  Crt                eF,  vS,  r,  dif;  =  3661
I2790      11 23.6   +09  33  d  Leo                vF,  S,  iF
I2791      11 23.6   +12  54  d  Leo                vF,  vS,  iF,  diffic
 3661   Gx 11 23.7   -13  48  r  Crt          14.  p  F,  S,  R,  stellar,  p  of  2;  =  IC  689
I 688      11 23.7   -09  48  d  Crt                eF,  vS,  R
I2792      11 23.7   +11  24  d  Leo                F,  S,  R
 3659   Gx 11 23.8   +17  49  s  Leo    2.1   13.  p  cF,  S,  lE,  r
 3662   Gx 11 23.8   -01  06  s  Leo    1.6   14.  p  vF,  S,  att  to  *13
I2793      11 23.8   +09  27  d  Leo                vF,  S,  iF,  diffic
 3657   Gx 11 23.9   +52  55  s  UMa    1.8   12.  p  cF,  vS,  R,  stellar
 3658   Gx 11 24.0   +38  34  s  UMa    2.1   13.  p  F,  S,  R,  svmbMN  =  *14
 3663   Gx 11 24.0   -12  17  r  Crt          13.  p  eF,  fan  shaped,  *  close
 3654   Gx 11 24.1   +69  26  r  UMa          13.  p  F,  S,  lE  15deg  +/-
I2794      11 24.1   +12  48  d  Leo                F,  eS,  R,  bM
I2795      11 24.1   +12  08  d  Leo                F,  vS,  R
I2796      11 24.1   +09  21  d  Leo                vF,  S,  iF
 3667   Gx 11 24.3   -13  49  r  Crt          13.  p  pF,  pL,  iR,  vlbM
I 687   Gx 11 24.3   +47  51  m  UMa    0.7   15.  p  eF,  eS,  R,  stell  N,  F*  f
I 690      11 24.3   -08  21  d  Crt                pB,  S,  R,  N  =  12m
 3664   Gx 11 24.4   +03  20  s  Leo    2.0   13.  p  pF,  biN
 3666   Gx 11 24.4   +11  21  s  Leo    4.2   12.  p  F,  E  90deg  +/-  ,  *6  f  34s  ,  5'  n
I2797      11 24.4   +11  42  d  Leo                F,  vS,  R,  bM
I2798      11 24.4   +12  25  d  Leo                vF,  S,  iF,  N,  diffic
I2799   Nb 11 24.4   +13  51  x  Leo    0.4          F,  S,  iF,  N
I2800      11 24.5   +12  12  d  Leo                vF,  S,  R,  bM
I2801      11 24.5   +10  11  d  Leo                F,  S,  R,  bM,  spir
I2802      11 24.5   +12  13  d  Leo                vF,  vS,  iF,  N,  v  diffic
I2803      11 24.6   +09  51  d  Leo                F,  vS,  E  70deg
 3665   Gx 11 24.7   +38  46  s  UMa    3.2   10.8   cB,  cL,  iR,  pgmbM
 3670   Gx 11 24.7   +23  57  r  Leo          14.  p  vF,  vS,  R
I2804   Gx 11 24.9   +13  13  m  Leo    0.8   15.  p  pB,  cS,  E  10deg  ,  exc  N
 3672   Gx 11 25.0   -09  48  s  Crt    4.1   11.  p  pB,  L,  E  0deg  +/-  ,  gbM
I2805    * 11 25.0   +14  01  x  Leo                vF,  S,  R,  bM,  diffic
 3673   Gx 11 25.2   -26  44  s  Hya    3.5   12.  p  F,  vL,  gvlbM,  *7  s  6'
I2806      11 25.3   +09  39  d  Leo                vF,  S,  iF;  annular?
I2807      11 25.3   +11  32  d  Leo                F,  S,  iF,  *14  att  p
 3669   Gx 11 25.4   +57  43  s  UMa    2.3   13.  p  vF,  pL,  pmE  135deg  +/-  ,  er
 3668   Gx 11 25.5   +63  27  r  UMa          13.  p  F,  pS,  iR,  gbM,  *9  np
I2808      11 25.5   +09  08  d  Leo                vF,  vS,  R,  bM,  spir
 3676    - 11 25.6   -10  37  r  Crt                eF,  vS,  R,  2  st  10  nf,  sf
I2809      11 25.6   +08  32  d  Leo                F,  S,  R,  bM;  spir?
 3680   OC 11 25.7   -43  15  s  Cen   12.     7.6   Cl,  cL,  pRi,  lC,  st  10...14
 3671   Gx 11 25.8   +60  29  r  UMa          15.  p  vF,  vS,  2  vS  st  inv
I2810   Nb 11 25.8   +14  40  x  Leo    1.           pF,  pS,  R,  bM,  *14  sf
I2811      11 25.8   +09  10  d  Leo                F,  S,  iF,  *14  f  30"
I 692   Gx 11 25.9   +09  59  u  Leo    0.8   14.  p  F,  vS,  R,  *12  sf  2'
I2812      11 25.9   +11  32  d  Leo                F,  S,  E  10deg
 3675   Gx 11 26.1   +43  35  s  UMa    5.9   11.  p  vB,  cL,  vmE  0deg  +/-  ,  vsmbMN,  many  st  p
I2813      11 26.1   +11  15  d  Leo                F,  vS,  R,  bM,  spir
I2814      11 26.1   +09  40  d  Leo                pF,  vS,  R,  bM,  *14  nf  30"
 3678   Gx 11 26.2   +27  53  r  Leo          14.  p  vF,  S,  R,  psbM,  *12  nf
 3679   Gx 11 26.2   -05  35  r  Leo          15.  p  eF,  cL,  R,  r  (v  near  v8*)
 3685    - 11 26.2   +04  08  r  Leo                eF,  vS
 3677   Gx 11 26.3   +46  58  s  UMa    2.0   14.  p  eF,  S,  R,  vsbM  *,  2  st  11  nf
I2815      11 26.3   +12  48  d  Leo                F,  eS,  R,  bM
I2816      11 26.3   +10  38  d  Leo                cF,  vS,  R,  bM,  spir
I2817      11 26.3   +09  09  d  Leo                F,  vS,  iF,  N
 3674   Gx 11 26.4   +57  03  s  UMa    2.0   13.  p  pF,  iF
I2820      11 26.4   +10  14  d  Leo                pF,  vS,  *16  att  n
 3681   Gx 11 26.5   +16  52  s  Leo    2.5   11.7   B,  pS,  R,  bM
I2818      11 26.5   +12  55  d  Leo                F,  vS,  R,  bM
I2819   Gx 11 26.5   +13  51  z  Leo          16.  p  cF,  S,  E  60deg  ,  bM
I2821      11 26.6   +13  58  d  Leo                F,  S
I2822   Gx 11 26.6   +11  26  u  Leo    1.7   15.  p  F,  pL,  E  110deg  ,  bM,  *14  s
I 691   Gx 11 26.7   +59  09  s  UMa    0.7   14.  p  pF,  pS,  R,  2  st  nr
I2823   Gx 11 26.7   +12  50  z  Leo          15.  p  pF,  S,  E  20deg  ,  biN?
I 693   Gx 11 26.8   -05  00  m  Leo    0.6   15.  p  F,  pS,  R,  gbM,  r
I2825      11 27.0   +08  27  d  Leo                F,  S,  iF,  N,  *15  att  sf
I2764   Gx 11 27.1   -28  59  c  Hya    1.7          pB,  pS,  R,  *10  nr  nf,  *7  f
I2824      11 27.1   +14  05  d  Leo                pF,  S,  R,  bM
I2826   Gx 11 27.1   +13  14  z  Leo          15.  p  pF,  cS,  N
 3684   Gx 11 27.2   +17  02  s  Leo    3.2   11.7   pB,  pL,  E,  vgbM
I2827      11 27.2   +11  31  d  Leo                F,  eS,  *14  sf
I2828   Gx 11 27.2   +08  43  m  Leo    1.0   15.  p  pF,  cS,  E  65deg  ,  bM  2  st  p
I2829   Gx 11 27.2   +10  18  z  Leo          15.  p  cF,  vS,  R,  bM,  spir,  *12  s
I2830   Gx 11 27.4   +07  48  z  Leo          15.  p  F,  S,  R,  bM
I2831      11 27.4   +08  59  d  Leo                F,  vS,  R
I2832      11 27.4   +13  59  d  Leo                pF,  S,  R,  bM
I2833      11 27.4   +13  36  d  Leo                vF,  S,  iF,  diffic,  *14  att(?)  np
 3683   Gx 11 27.5   +56  53  s  UMa    2.0   13.  p  cB,  pL,  E
I2834      11 27.5   +13  34  d  Leo                vF,  S,  iF,  diffic,  other  neb  att  f
I2835      11 27.5   +12  09  d  Leo                cF,  vS,  R,  bM,  *14  f
I2836      11 27.6   +09  05  d  Leo                F,  vS,  neb  *15  n  1'
 3682   Gx 11 27.7   +66  35  s  Dra    2.0   13.  p  cB,  S,  iR,  spmbMN
 3686   Gx 11 27.7   +17  13  s  Leo    3.3   11.4   pB,  L,  vlE,  vgbM,  r
I2837      11 27.7   +10  19  d  Leo                cF,  vS,  R,  bM,  spir
I2884      11 27.7   -79  44  d  Cha                eeF,  eS,  cE  145deg  ,  susp
 3688   Gx 11 27.8   -09  10  r  Crt          15.  p  eF,  eS,  lE  0deg  ,  gbM
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I2838      11 27.8   +14  01  d  Leo                F, S
I2839      11 27.8   +10  49  d  Leo                vF,  S,  iF
I2840      11 27.8   +13  26  d  Leo                vF,  S,  iF,  N
I2841      11 27.8   +12  36  d  Leo                F,  vS,  R,  bM,  diffic
I2842      11 27.8   +09  39  d  Leo                vF,  S,  iF
 3687   Gx 11 28.0   +29  31  s  UMa     2.0   13.  p pB,  pS,  R,  lbM,  r
 3699   Pl 11 28.0   -59  57  s  Cen     1.1          B,  pL,  iR,  pgpmbM
I 695       11 28.0   -11  43  d  Crt                eF,  S,  v diffic
I2843   Gx 11 28.0   +13  11  z  Leo          15.  p F,  cS,  R,  bM,  diffic,  *8.7  f 2'
I2844      11 28.0   +11  27  d  Leo                F,  S,  iF
I2845      11 28.0   +12  32  d  Leo                F,  vS,  iF,  N
I2846   Gx 11 28.0   +11  09  m  Leo     0.8   15.  p pB,  vS,  R,  bM,  *12  f
I2847      11 28.1   +13  56  d  Leo                vF,  vS,  iF,  diffic
 3689   Gx 11 28.2   +25  40  s  Leo     1.6   12.3   pB,  pL,  lE,  bM
 3691   Gx 11 28.2   +16  55  s  Leo     1.3   14.  p F,  pS,  lE,  r
 3693   Gx 11 28.2   -13  10  r  Crt          13.  p cF,  S,  E,  gbM
I2848      11 28.2   +13  02  d  Leo                vF,  S,  iF
I2849      11 28.2   +09  06  d  Leo                pF,  vS,  R,  bM
I2850      11 28.2   +09  04  d  Leo                pB,  S,  E 120deg  , bM,  *13  sf
I2852      11 28.2   +09  48  d  Leo                F,  vS,  R,  bM,  spir;  neb*?
I2856   Gx 11 28.2   -12  53  m  Crt     0.7   14.  p vF,  vS,  cE  30deg  , cbM,  susp
I2851      11 28.3   +11  24  d  Leo                F,  S
I2853   Gx 11 28.3   +09  08  u  Leo     1.0   15.  p pB,  pS,  E 160deg  , bM
I2854      11 28.3   +08  58  d  Leo                F,  vS,  R,  bM,  spir
 3692   Gx 11 28.4   +09  24  s  Leo     3.3   13.  p F,  mE,  r
I2855      11 28.4   +09  41  d  Leo                F,  vS,  iF,  N
 3690   Gx 11 28.5   +58  33  s  UMa     2.4   12.  p pB,  pS,  vlE  80deg  +/- , pgbM,  S st sf nr
I 694   Gx 11 28.5   +58  34  v  UMa     1.2          vS,  forms  Dneb  with  3690
I2857      11 28.5   +09  06  d  Leo                F,  pL,  mE  160deg  , bM
I 696   Gx 11 28.6   +09  05  u  Leo     1.0   14.  p vF,  pS,  R,  vlbM
I 697   Gx 11 28.6   -01  37  z  Leo          15.  p F,  S,  R,  gbM
I2858      11 28.6   +13  40  d  Leo                F,  S,  R,  bM
 3697   Gx 11 28.7   +20  48  r  Leo          14.  p eF,  vS,  E 90deg
I2859      11 28.7   +09  07  d  Leo                cF,  vS,  R,  bM
I2860      11 28.7   +14  02  d  Leo                vF,  S,  iF,  N
I2862      11 28.7   +10  08  d  Leo                F,  S,  iF
 3696   Gx 11 28.8   -11  15  r  Crt                eF,  eS,  R,  bMN
 3694   Gx 11 28.9   +35  24  s  UMa     1.0   13.  p cF,  S,  R,  mbM
I2863      11 28.9   +09  06  d  Leo                pF,  vS,  E 110deg  , bM
 3698    - 11 29.0   +35  40  r  UMa                eF,  vS
I 698   Gx 11 29.0   +09  06  u  Leo     1.0   14.  p F,  vS,  R,  bM
I2861   Gx 11 29.0   +38  51  m  UMa     0.2   14.  p F,  S,  R,  dif
I2864      11 29.0   +12  22  d  Leo                F,  vS,  iF
I2865    * 11 29.0   +09  07  x  Leo                vF,  S,  dif
I2866    * 11 29.0   +09  03  x  Leo                vS,  vF,  iF
I2867      11 29.0   +09  05  d  Leo                cF,  S,  iF,  v diffic,  *14  np
I2872   Nb 11 29.0   -62  57  s  Cen   12.          vL,  mE,  bM
I 699   Gx 11 29.1   +08  59  u  Leo     1.3   15.  p F,  vS,  lE  ns
I2868      11 29.1   +09  06  x  Leo                vF,  S,  iF,  N;  = IC  698
I2869      11 29.1   +09  01  d  Leo                vF,  S,  R,  bM,  spir
I2870   Gx 11 29.1   +11  52  u  Leo     1.4   18.  p F,  pL,  dif,  diffic
 3695   Gx 11 29.2   +35  35  r  UMa          15.  p eF,  pS,  3694  4'  s
I 700   Gx 11 29.3   +20  33  m  Leo     0.8   15.  p pS,  R,  lbM
I2871   Gx 11 29.3   +08  36  m  Leo     0.7   15.  p F,  cS,  E 85deg
 3701   Gx 11 29.4   +24  05  r  Leo          14.  p pF,  pL,  lE
 3711   Gx 11 29.4   -11  04  r  Crt          15.  p eF,  vS,  *9  s 4'
 3700   Gx 11 29.5   +35  31  r  UMa          15.  p eF,  3694  p
I2873   Gx 11 29.5   +13  12  m  Leo     0.6   15.  p pF,  cS,  E  5deg  , bM
I2874   OC 11 29.5   +10  38  x  Leo                F,  pS,  iF;  Cl?
 3703    - 11 29.6   -08  37  r  Crt                eF,  vS,  gbMN
I2875      11 29.6   +12  59  d  Leo                F,  vS,  R,  bM,  *9  sp
I2876      11 29.6   +09  01  d  Leo                vF,  S,  dif
I2877   Gx 11 29.6   +12  51  z  Leo          16.  p F,  S,  R,  lbM
I2878      11 29.6   +09  58  d  Leo                pF,  vS,  iF,  N
 3706   Gx 11 29.7   -36  25  s  Cen     2.9   12.  p pB,  cS,  R,  psmbM
I2879      11 29.7   +09  01  d  Leo                vF,  S,  dif
I2880      11 29.9   +13  12  d  Leo                pF,  vS,  R,  bM
I2881      11 29.9   +12  31  d  Leo                F,  vS
 3704   Gx 11 30.0   -11  30  r  Crt          14.  p vF,  pS,  *9- 10  2'  ssf
 3705   Gx 11 30.1   +09  17  s  Leo     5.0   11.  p pF,  pL,  R,  vsmbM,  r
 3707    - 11 30.1   -11  32  r  Crt                vF,  S,  *15  (neb?)  2s   f
 3702   Gx 11 30.2   -08  52  r  Crt          15.  p eF,  eS,  R,  glbM
I2882      11 30.2   +11  59  d  Leo                vF,  S,  R,  bM,  diffic
I2883      11 30.3   +10  55  d  Leo                F,  vS,  R,  bM
I2885      11 30.4   +09  46  d  Leo                F,  vS,  R,  bM,  spir
I2886      11 30.4   +11  34  d  Leo                F,  vS,  R,  bM,  spir,  *12  sf
I2887   Gx 11 30.5   +09  23  z  Leo          15.  p F,  pS,  E,  curved,  *10  nf 1'
I2888      11 30.6   +09  55  d  Leo                pF,  vS,  E 130deg
I2889      11 30.6   -13  05  d  Crt                eF,  vS,  cE  165deg  , bM,  susp
 3708    - 11 30.7   -03  13  r  Leo                vF,  S,  R,  gbM
 3709    - 11 30.7   -03  15  r  Leo                eF,  eS
I 701   Gx 11 30.8   +20  28  v  Leo     0.7          eF,  vS,  R,  2 pB  st  sf
I2890      11 30.8   +13  11  d  Leo                vF,  S,  iF,  N
I2891      11 30.8   +12  41  d  Leo                F,  S,  iF,  N,  diffic
I2892      11 30.8   +10  35  d  Leo                F,  vS,  iF
I 702      11 30.9   -04  56  d  Leo                F,  vS,  R,  N = 13.5
I2893   Gx 11 30.9   +13  23  z  Leo          16.  p F,  eS,  E 345deg
 3710   Gx 11 31.0   +22  46  r  Leo          14.  p F,  S,  *7- 8  nf  5'
I2894   Gx 11 31.0   +13  13  z  Leo          16.  p vF,  cS,  R,  bM
I2895      11 31.0   +09  59  d  Leo                F,  vS,  R,  bM
 3712   Gx 11 31.1   +28  34  r  UMa          15.  p F,  vS,  R,  smbM
I2896      11 31.2   +12  21  d  Leo                pB,  vS,  annular?
I2897      11 31.3   +11  33  d  Leo                cF,  vS,  R,  bM,  *14  p
I2898      11 31.3   +13  20  d  Leo                vF,  S,  iF,  *14  nf
I2899      11 31.3   +10  38  d  Leo                F,  S,  E 350deg  ; st?
 3715   Gx 11 31.5   -14  12  r  Crt          13.  p pF,  S,  R,  vgvlbM
 3717   Gx 11 31.5   -30  19  s  Hya     5.8   12.  p pB,  S,  mE,  *13  att
I2900      11 31.5   +13  10  d  Leo                vF,  S,  R,  bM
I2901      11 31.5   +12  42  d  Leo                F,  S,  iF,  N
 3713   Gx 11 31.6   +28  09  r  Leo          14.  p F,  cS,  R,  sbMN
I2902      11 31.6   +14  13  d  Leo                F,  S,  R,  bM,  diffic
 3716   Gx 11 31.7   +03  30  r  Leo          14.  p vF,  vS
I2903      11 31.7   +12  38  d  Leo                F,  vS,  iF,  N
I2904      11 31.7   +13  11  d  Leo                FN  in  vF,  dif  neb
 3714   Gx 11 31.8   +28  22  r  UMa          14.  p F,  S,  R,  psbM
I 703      11 31.8   -11  36  d  Crt                eeF,  S,  R,  p of  2
I2905      11 31.8   +09  06  d  Leo                vF,  S,  R,  bM,  *14  nf
I2906      11 31.8   +13  08  d  Leo                F,  vS,  R,  bM
I2907      11 31.8   +09  54  d  Leo                vF,  S,  iF,  N
I2908      11 31.8   +12  56  d  Leo                vF,  S,  iF,  *13  sp
I2909      11 31.8   +11  28  d  Leo                vF,  S,  R,  vlbM
I2913   Gx 11 31.8   -30  25  m  Hya     0.4   14.  p B,  pS,  R,  sf  3717
I 704      11 31.9   -11  33  d  Crt                eF,  vS  (close  D?),  f of  2
I2910   Gx 11 31.9   -09  45  m  Crt     0.3   15.  p vF,  vS,  sbM  *13
I2911      11 32.1   +12  59  d  Leo                vF,  cS,  iF,  other  nf
I2912      11 32.1   +11  43  d  Leo                F,  S,  R,  bM,  diffic
 3719   Gx 11 32.2   +00  49  s  Leo     2.0   14.  p vF,  np  of  2
I2914   Gx 11 32.2   +13  30  z  Leo          15.  p F,  S,  R,  bM
I2915      11 32.3   +14  29  d  Leo                F,  cS,  R,  bM
I2916      11 32.3   +11  41  d  Leo                F,  S,  R,  bM
I2917      11 32.3   +10  57  d  Leo                vF,  pS,  iF
 3720   Gx 11 32.4   +00  48  s  Leo     1.1   13.3   vF,  sf  of  2
 3723   Gx 11 32.4   -09  58  r  Crt          14.  p F,  S,  R
I2918      11 32.4   +13  15  d  Leo                vF,  S,  E 100deg  , bM
 3718   Gx 11 32.6   +53  04  s  UMa     8.7   10.5   pB,  vL,  R,  vglbM
I2919      11 32.6   +14  11  d  Leo                pF,  cS,  R,  bM
I2920      11 32.8   +12  34  d  Leo                F,  vS,  iF,  N
I2921      11 32.8   +10  18  d  Leo                cF,  S,  R,  bM,  spir
I 705   Gx 11 32.9   +50  14  m  UMa     0.3   15.  p eeF,  vS,  R
I2922      11 32.9   +12  55  d  Leo                pB,  vS,  R,  bM
I2923      11 32.9   +13  10  d  Leo                vF,  cS,  iF,  N,  diffic,  *10  sf
I2924      11 32.9   +09  01  d  Leo                vF,  S,  iF,  N,  *11  nf
I 706   Gx 11 33.1   -13  22  m  Crt     1.2   15.  p eF,  vS,  lbM
I2926      11 33.1   +12  26  d  Leo                pF,  vS,  R,  stell  N,  spir
I2927      11 33.1   +13  05  d  Leo                vF,  vS,  iF
 3728   Gx 11 33.2   +24  27  r  Leo          14.  p F,  S,  R,  bM
I2925      11 33.2   +34  16  d  UMa                F,  S,  R,  gbM,  biN
 3726   Gx 11 33.3   +47  02  s  UMa     6.0   10.4   pB,  vL,  lE  0deg  , vsmbM  *15,  *11  n
I2928   Gx 11 33.5   +34  18  u  UMa     1.2   15.  p F,  cS,  R,  gbMN
I2929      11 33.5   +12  08  d  Leo                F,  pS,  dif
I 707   Gx 11 33.6   +21  22  u  Leo     0.6   14.  p pF,  pS,  bM
 3725   Gx 11 33.7   +61  53  s  UMa     1.4   14.  p cF,  S,  R,  gvlbM,  r
 3727   Gx 11 33.7   -13  52  r  Crt                eF,  eS,  R,  gbMN,  *11  sf  1'
I2930   Gx 11 33.7   +10  05  z  Leo          16.  p F,  cS,  E 60deg  , bM
 3729   Gx 11 33.8   +53  08  s  UMa     3.1   11.4   pB,  pL,  lE  0deg  +/- , gbM,  *12  nr
I2931      11 33.8   +12  28  d  Leo                F,  cS,  N;  neb*(?)  15m  np  20"
I 708   Gx 11 33.9   +49  03  u  UMa     1.7   14.  p eF,  S,  R,  1st  of  4
I2932      11 33.9   +10  33  d  Leo                pB,  S,  R,  bM
 3731   Gx 11 34.2   +12  32  r  Leo          14.  p vF,  vS,  R
 3732   Gx 11 34.2   -09  51  s  Crt     1.3   13.  p F,  S,  R,  psbM,  *14  sp  225deg
I 709   Gx 11 34.2   +49  02  z  UMa          15.  p eeF,  S,  R,  2nd  of  4
I2933   Gx 11 34.2   +34  18  u  UMa     1.4   15.  p F,  cS,  E ns,  gbMN
I2934   Gx 11 34.3   +13  20  m  Leo     0.6   15.  p F,  S,  iF,  *14  nf  0'.5
 3721   Gx 11 34.4   -09  35  r  Crt          15.  p eF,  eS,  R,  gbM
I 710   Gx 11 34.4   +25  51  z  Leo          16.  p F,  vS,  R,  lbM
 3722   Gx 11 34.5   -09  39  r  Crt          16.  p eF,  vS,  R,  sbMN,  1st  of  2
 3724   Gx 11 34.5   -09  41  r  Crt          15.  p eF,  vS,  R,  sbMN,  2nd  of  2
 3730   Gx 11 34.7   -09  37  r  Crt                eF,  S,  lE  140deg  , glbnM
 3734   Gx 11 34.7   -14  06  r  Crt          14.  p eF,  S,  R,  gbM
I 711   Gx 11 34.7   +48  57  z  UMa          15.  p eeF,  pS,  R,  F,  * close  sp
I 712   Gx 11 34.8   +49  04  v  UMa     1.6          eF,  S,  R,  pB,  * nf
I 713      11 34.8   +16  51  d  Leo                eF,  susp,  3'  nnf  from  *6
I2935      11 34.8   +10  15  d  Leo                cF,  cS,  E 130deg  , bM
I2936      11 34.9   +13  01  d  Leo                F,  S,  R,  bM
 3733   Gx 11 35.0   +54  51  s  UMa     4.8   12.  p eF,  S,  iR,  *6 sf
I2937      11 35.1   +10  06  d  Leo                F,  S,  R,  bM
 3742   Gx 11 35.4   -37  56  r  Cen                pF,  pL,  vlE,  glbM
 3736   Gx 11 35.6   +73  28  r  Dra          15.  p vF,  vS,  R
 3737   Gx 11 35.6   +54  57  s  UMa     1.3   14.  p vF,  stellar
 3739   Gx 11 35.6   +25  04  r  Leo          15.  p vF,  bet  2 st  12
I2938   Gx 11 35.6   +13  41  z  Leo          15.  p cF,  pS
I2939      11 35.6   +10  42  d  Leo                cF,  S,  R,  bM
 3738   Gx 11 35.8   +54  31  s  UMa     2.6   11.7   pB,  pL,  bM
 3743   Gx 11 35.8   +21  44  r  Leo          15.  p F,  S,  R,  *9  1'  sf
 3744   Gx 11 35.8   +23  00  r  Leo          15.  p eF,  S,  R,  lbM
 3749   Gx 11 35.8   -37  59  r  Cen                F,  cS,  lE,  gvlbM
 3735   Gx 11 36.0   +70  32  s  Dra     4.2   12.  p pB,  L,  mE  130deg  , mbM
 3741   Gx 11 36.0   +45  18  r  UMa          14.  p vF,  S,  R,  vgbM
I2940   D* 11 36.0   +21  46  x  Leo                eF,  susp  (not  seen  at  Birr)
 3766   OC 11 36.1   -61  37  s  Cen   12.    5.3   Cl,  pL,  pRi,  pC,  st  8...13
 3777   Gx 11 36.1   -12  34  r  Crt          14.  p eF,  pS,  iR,  gbM,  S* or neb  f
 3740   Gx 11 36.2   +59  59  r  UMa          15.  p vF,  vS,  R,  vgbM
I2941   Gx 11 36.2   +10  03  m  Leo     0.8   15.  p F,  pL  R,  bM,  spir
I2942      11 36.2   +11  49  d  Leo                cF,  cS,  R,  bM
 3758   Gx 11 36.4   +21  36  r  Leo          15.  p pB,  S,  R,  bM,  *8.5  3'  f
 3763   Gx 11 36.4   -09  50  r  Crt          13.  p F,  dif,  sp  7 st;  = IC  714?
I 714      11 36.5   -09  51  d  Crt                vF,  pS,  lE  170deg  , gbMN
 3755   Gx 11 36.6   +36  25  s  UMa     3.2   13.  p eF,  pL,  pmE,  gbM
I2944  C+N 11 36.6   -63  02  s  Cen   75.    4.5   *3.4  in  eL  neb
I2943   Gx 11 36.7   +54  51  v  UMa     0.4   14.8   pF,  S
 3756   Gx 11 36.8   +54  18  s  UMa     4.4   11.5   pF,  L,  lE
 3761   Gx 11 36.8   +23  00  r  Leo          15.  p vF,  S,  R,  bM
 3759   Gx 11 36.9   +54  49  s  UMa     1.5   14.  p F,  S,  iR,  *11  nr
 3764   Gx 11 36.9   +17  54  r  Leo          15.  p F,  S,  R
I 715      11 36.9   -08  22  d  Crt                F,  pS,  R
 3757   Gx 11 37.1   +58  26  r  UMa          13.  p vF,  R,  stellar,  vS*  1 d  sf
 3765   Gx 11 37.1   +24  07  r  Leo          15.  p vF,  S,  R
I2945   Gx 11 37.1   +12  55  u  Leo     1.2   15.  p pF,  pS
 3768   Gx 11 37.2   +17  51  r  Leo          13.  p vF,  eS,  stellar
 3767   Gx 11 37.3   +16  53  r  Leo          14.  p vF,  S,  bM
 3747    - 11 37.5   +74  59  r  Dra                eF,  S,  place  doubtful
 3762   Gx 11 37.5   +61  46  r  UMa          13.  p F,  vlE,  gbM
I2946   Gx 11 37.5   +32  14  z  UMa          15.  p F,  S,  R,  gvlbM
I2947   Gx 11 37.5   +31  22  m  UMa     0.6   15.  p F,  cS,  R,  gbM,  r
 3752      11 37.6   +75  17  d  Dra                pB,  pL
 3745   Gx 11 37.7   +22  01  s  Leo     0.4          pB,  pS,  R
 3746   Gx 11 37.7   +22  00  s  Leo     1.3   15.  p pB,  pS,  R
 3769   Gx 11 37.7   +47  54  s  UMa     3.2   12.  p pB,  S,  pmE
 3748   Gx 11 37.8   +22  02  s  Leo     0.8          pB,  pS,  R
 3772   Gx 11 37.8   +22  42  r  Leo          14.  p vF,  S,  E,  r
 3750   Gx 11 37.9   +21  58  s  Leo     0.9          pB,  R,  cbM,  1st  of  3 in  line
 3751   Gx 11 37.9   +21  56  s  Leo     0.4   15.  p F,  L,  E 45deg
 3753   Gx 11 37.9   +21  59  s  Leo     2.0   15.  p pB,  pL,  2nd  of  3 in  line
 3754   Gx 11 37.9   +21  59  s  Leo     0.4          vF,  R,  3rd  of  3 in  line
 3770   Gx 11 38.0   +59  37  r  UMa          13.  p pF,  S,  R,  gbM,  r
 3789   Gx 11 38.1   -09  36  F  Crt          16.  p eF,  vS,  E 0deg  , gbM
 3773   Gx 11 38.2   +12  07  s  Leo     1.6   13.  p cF,  cS,  R,  psbM
 3775   Gx 11 38.3   -10  37  r  Crt          15.  p pB,  bMN
 3776   Gx 11 38.3   -03  20  r  Vir                eF,  vS
 3771   Gx 11 38.4   -09  20  r  Crt                vF,  eS,  R,  *10  p 15s
 3778   Gx 11 38.4   -50  43  c  Cen     1.4          eF,  S,  R,  am  50  S st
 3774   Gx 11 38.6   -08  59  r  Crt          15.  p eF,  vS,  E 75deg  , *9  np  3'
I2948   Nb 11 38.8   -63  32  x  Cen   60.           eeL
 3779      11 38.9   -10  37  D  Crt                eeF
 3781   Gx 11 39.0   +26  22  r  Leo          15.  p vF,  vS,  R,  bM
 3783   Gx 11 39.0   -37  45  s  Cen     1.9   13.  p cB,  R,  sbMN  *,  *9  sf
I 716   Gx 11 39.1   -00  13  u  Vir     1.7   15.  p vF,  S,  lbM
 3782   Gx 11 39.3   +46  31  s  UMa     1.7   13.  p F,  S,  att  to  *15,  another  * inv
 3780   Gx 11 39.4   +56  16  s  UMa     3.1   12.  p pF,  L,  vlE,  vgbM,  r
 3784   Gx 11 39.4   +26  20  r  Leo          15.  p vF,  vS,  R,  gmbM
 3793   Gx 11 39.4   +31  52  r  UMa          15.  p vS,  f  3788
I 717    ? 11 39.4   -10  39  x  Crt                eF,  pS,  E pf,  dif
 3785   Gx 11 39.5   +26  19  r  Leo          15.  p vF,  eS,  R,  bM
 3794   Gx 11 39.6   +55  11  r  UMa          15.  p cF,  pS,  vS*  vnr
 3786   Gx 11 39.7   +31  55  s  UMa     2.4   13.  p pB,  pL,  E 57deg  , gbM,  p of  2
 3787   Gx 11 39.7   +20  29  r  Leo          14.  p vF,  vS,  R,  *15  p
 3788   Gx 11 39.7   +31  56  s  UMa     2.2   13.  p cB,  pL,  pmE  177deg  , pgbM
 3790   Gx 11 39.8   +17  43  r  Leo          14.  p cF,  vS,  pmE,  sbM,  2 S st f,  1st  of  3
 3791   Gx 11 39.8   -09  23  r  Crt          14.  p vF,  vS,  R,  gbM,  *8  s 6'
 3792    - 11 39.8   +05  00  r  Vir                vF,  dif
I 718   Gx 11 39.9   +08  52  u  Vir     1.2   15.  p vF,  S
 3795   Gx 11 40.1   +58  37  s  UMa     2.4   14.  p vF,  S,  mE
 3797   Gx 11 40.1   +31  54  h  UMa     0.2   15.  p vS,  f  3788
 3798   Gx 11 40.2   +24  43  r  Leo          14.  p F,  cS,  lE,  stellar,  r
 3799   Gx 11 40.2   +15  20  s  Leo     0.9   14.  p cF,  R,  p of  2
 3800   Gx 11 40.2   +15  21  s  Leo     2.1   13.  p F,  pS,  E,  pglbM,  r,  f of  2
 3801   Gx 11 40.3   +17  44  s  Leo     3.2   12.1   pF,  pL,  R,  bM,  r,  2nd  of  3
 3802   Gx 11 40.3   +17  46  s  Leo     1.4   13.6   vF,  pS,  r,  2 vB  st  p,  3rd  of  3
 3803   Gx 11 40.3   +17  49  r  Leo                vF,  S,  R
I 719   Gx 11 40.3   +09  00  s  Vir     1.7   14.  p F,  pL,  lE  45deg  , bM
 3796   Gx 11 40.6   +60  18  r  UMa          13.  p F,  cS,  R,  mbM
 3808   Gx 11 40.7   +22  27  s  Leo     0.7   11.9   vF,  vS
 3805   Gx 11 40.8   +20  22  r  Leo          14.  p cB,  cS,  R,  bM,  r
 3806   Gx 11 40.8   +17  48  r  Leo          14.  p F,  pL,  *9- 10  s 5'
 3807   Gx 11 40.8   +17  47  u  Leo     1.5   15.  p vF,  S,  R  (vF*?)
 3804   Gx 11 40.9   +56  12  s  UMa     2.4   13.  p pB,  E
I2949      11 40.9   -46  29  d  Cen                no  descr
 3810   Gx 11 41.0   +11  28  s  Leo     4.3   10.8   B,  L,  vlE
 3812   Gx 11 41.1   +24  51  r  Leo          14.  p cF,  vS,  R,  1st  of  3,  *6  sf  3'
 3809   Gx 11 41.3   +59  54  r  UMa          13.  p pB,  S,  R,  glbM
 3811   Gx 11 41.3   +47  42  s  UMa     2.4   13.  p F,  S,  vlE,  glbM
 3813   Gx 11 41.3   +36  33  s  UMa     2.3   11.7   cB,  pL,  pmE  83deg  , bM
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 3814   Gx 11 41.5   +24  49  r  Leo          15.  p vS,  nebs*,  p 3815
I2950   Gx 11 41.6   +37  58  z  UMa          15.  p F,  cS,  lE pf,  gbM,  r
 3815   Gx 11 41.7   +24  49  r  Leo          14.  p cF,  S,  3rd of 3
 3816   Gx 11 41.8   +20  07  r  Leo          13.  p F,  S,  bM
 3817   Gx 11 41.9   +10  19  r  Leo          14.  p F,  1st of 4
 3818   Gx 11 42.0   -06  09  s  Vir    2.1   11.8   F,  pS,  R,  psbM
 3819   Gx 11 42.1   +10  22  r  Leo          15.  p vF,  2nd  of 4
 3820   Gx 11 42.1   +10  24  r  Leo          15.  p eF,  vS,  3819  s
 3821   Gx 11 42.2   +20  20  r  Leo          14.  p vF,  cS,  R,  bM,  bet  2 st
 3822   Gx 11 42.2   +10  17  r  Vir          13.  p pF,  pS,  3rd  of  4
 3823   Gx 11 42.2   -13  51  r  Crt          14.  p F,  cS,  lE,  pslbM
I 720   Gx 11 42.3   +08  46  m  Vir    1.0   15.  p F,  S,  R
 3825   Gx 11 42.4   +10  17  r  Vir          14.  p pF,  pS,  4th  of  4
 3826   Gx 11 42.4   +26  30  r  Leo          14.  p pF,  S,  R,  psbM,  stellar
I 721   Gx 11 42.5   -08  22  m  Crt    1.1   15.  p pF,  pL,  E pf
 3827   Gx 11 42.6   +18  51  r  Leo          13.  p F,  S,  lbM
I 722      11 42.6   +09  04  d  Vir               eF,  vS,  *10  nf  2'
 3824   Gx 11 42.8   +52  47  s  UMa    1.6   15.  p vF,  cS,  pmE
 3828   Gx 11 42.9   +16  30  r  Leo          15.  p vF,  S,  dif
 3901   Gx 11 43.0   +77  24  r  Cam          14.  p pF,  pL,  r;  place  doubtful
I 723      11 43.0   -08  19  d  Crt               pB,  S,  N = 12.5,  r
 3830   Gx 11 43.2   +26  35  r  Leo          14.  p eF
 3831   Gx 11 43.2   -12  52  r  Crt          14.  p F,  vS,  R,  bM
I 724      11 43.4   +09  02  d  Vir               F,  lE  45deg  ,  S,  bM
I2951   Gx 11 43.4   +19  44  u  Leo    1.4   15.  p *14  in  neb
 3829   Gx 11 43.5   +52  43  s  UMa    1.2   15.  p vF,  vS
 3832   Gx 11 43.5   +22  44  r  Leo          14.  p vF,  pL,  2 suspected  neb  nr
 3833   Gx 11 43.5   +10  10  r  Vir          14.  p eF,  pS
 3836   Gx 11 43.5   -16  48  r  Crt          13.  p F,  S,  F* close  n
I 725   Gx 11 43.5   -01  40  z  Vir          15.  p F,  vS,  lE ns,  *11  n 1'
 3834   Gx 11 43.6   +19  05  v  Leo    1.9         vF,  vS,  slbMN  *13
 3848   Gx 11 43.7   +10  16  r  Vir          15.  p eF,  vS
I 726      11 43.8   +33  18  d  UMa               vF,  pL,  R
 3837   Gx 11 43.9   +19  54  r  Leo          14.  p cF,  S,  R,  1st  of  5
 3839   Gx 11 43.9   +10  48  r  Leo          13.  p vF,  S,  R,  lbM
 3840   Gx 11 43.9   +20  05  r  Leo          14.  p F,  S,  lE
 3843   Gx 11 43.9   +07  56  r  Vir          14.  p F,  E sp  nf,  *11  p
 3841   Gx 11 44.0   +19  59  r  Leo          15.  p cF,  S,  R,  2nd  of  5
 3842   Gx 11 44.0   +19  57  s  Leo    1.2   13.  p F,  S,  R,  vglbM,  3rd  of  5
 3844   Gx 11 44.0   +20  02  r  Leo          15.  p vF,  pS,  lE
 3835   Gx 11 44.1   +60  07  s  UMa    2.0   13.  p pB,  E,  gbM,  ** 8 sf  5'
 3845   Gx 11 44.1   +20  00  r  Leo          15.  p vF,  pS,  4th  of  5
 3838   Gx 11 44.2   +57  57  s  UMa    1.7   13.  p pB,  cS,  E,  psbM  *12
 3847      11 44.2   +33  21  D  UMa               F,  S,  R,  psbM
 3849    - 11 44.2   +03  10  r  Vir               F,  S,  F* 2'  ssp
 3851   Gx 11 44.3   +19  59  r  Leo          15.  p eF,  vS,  R,  5th  of  5
 3855      11 44.3   +33  20  D  UMa               eF,  vS
I2952      11 44.3   +33  20  d  UMa               pF,  S,  dif,  vlbM
 3852    - 11 44.4   +10  18  r  Vir               eF,  vS;  = 3848?
 3853   Gx 11 44.4   +16  34  r  Leo          13.  p S,  R,  bM
 3856      11 44.4   +33  20  D  UMa               vF,  R,  bM
I2953      11 44.4   +33  20  d  UMa               F,  cS,  dif,  vlbM
 3846   Gx 11 44.5   +55  40  s  UMa    1.2   15.  p F,  pL,  R,  vgbM
 3854    - 11 44.5   -09  22  r  Crt               eF,  vS,  lE  70deg  ,  bMN
I 727   Gx 11 44.5   +10  46  u  Leo    1.6   15.  p vF,  eS,  R,  3839  p
 3860   Gx 11 44.6   +19  49  r  Leo          14.  p vF,  vS,  r
 3857   Gx 11 44.8   +19  33  r  Leo          15.  p vF,  vS,  mbM
 3861   Gx 11 44.8   +20  00  r  Leo          14.  p F,  S,  R,  bM
 3858   Gx 11 44.9   -09  16  m  Crt    1.9   13.  p eF,  eS,  R,  gbM,  *9.5  p 3s
 3859   Gx 11 44.9   +19  28  r  Leo          15.  p eF,  vS,  R,  lbN,  r?
 3865   Gx 11 44.9   -09  14  s  Crt    2.3   13.  p F,  pL,  dif
I 728   Gx 11 44.9   -01  36  u  Vir    1.3   15.  p vF,  S,  R
 3862   Gx 11 45.1   +19  36  s  Leo    1.6   12.6   vF,  vS,  R,  *17  n
 3863   Gx 11 45.1   +08  29  r  Vir          14.  p vF,  2' l,  mE  70deg  ,  glbM
I2955   Gx 11 45.1   +19  36  u  Leo    1.3   14.  p eF,  close  to  3862
 3864   Gx 11 45.2   +19  24  r  Leo          15.  p eF,  vS,  R
I 729   Gx 11 45.2   +33  19  z  UMa          15.  p F,  pS,  R
I2954   Gx 11 45.2   +26  46  u  Leo    1.3   15.  p F,  S,  R,  gbM,  stell
I2956   Gx 11 45.2   +26  46  u  Leo    1.3   15.  p pF,  cS,  lbM
 3866   Gx 11 45.3   -09  20  r  Crt          14.  p sf  3865,  not  so  L
 3867   Gx 11 45.4   +19  24  r  Leo          14.  p F,  S,  irrR,  mbM,  s  of  2
 3868   Gx 11 45.4   +19  27  r  Leo          15.  p vF,  vS,  R,  mbM,  n  of  2
 3876   Gx 11 45.4   +09  11  D  Vir          13.  p vF,  r
 3850   Gx 11 45.6   +55  53  s  UMa    2.3   14.  p eF,  pL,  lE
I 730   Gx 11 45.6   +03  13  m  Vir    0.6   15.  p F,  vS,  R,  gbM,  R
I2957      11 45.6   +33  18  d  UMa               F,  S,  R,  *14  nr  f
 3873   Gx 11 45.7   +19  47  r  Leo          14.  p vF,  pS,  lE,  3875  sf
I2958   Gx 11 45.7   +33  09  m  UMa    0.5   16.  p F,  S,  dif
 3869   Gx 11 45.8   +10  50  r  Leo          13.  p F,  S,  iR,  psbM
 3872   Gx 11 45.8   +13  46  s  Leo    2.2   11.7   B,  S,  R,  smbN  *
 3874   D* 11 45.8   +08  33  r  Vir               vF,  vS,  suspected
 3875   Gx 11 45.8   +19  46  r  Leo          15.  p vF,  vS,  r
 3870   Gx 11 45.9   +50  12  s  UMa    1.3   13.  p cF,  cS,  R,  psbM
I 731      11 46.0   +49  34  d  UMa               vF,  vS,  R
I 732   Gx 11 46.0   +20  26  h  Leo    0.4   15.  p vF,  v dif
I 733      11 46.0   -08  10  d  Crt               F,  vS,  R,  gbM,  r
 3877   Gx 11 46.1   +47  30  s  UMa    5.4   12.  p B,  L,  mE  37deg
 3882   Gx 11 46.1   -56  22  A  Cen               vF,  lE,  2 st  inv
I2959   Gx 11 46.1   +33  06  u  UMa    1.1   15.  p vF,  S,  R,  r
 3871   Gx 11 46.2   +33  05  D  UMa          15.  p eF,  R,  gbM,  1st  of  4
 3878   Gx 11 46.2   +33  12  r  UMa          15.  p vF,  R,  2nd  of  4
 3884   Gx 11 46.2   +20  25  r  Leo          14.  p cF,  S,  iR,  gbM,  r,  *7  sp  6'
I 734   Gx 11 46.2   -08  17  m  Crt    0.8   16.  p F,  S,  dif
 3880   Gx 11 46.3   +33  10  r  UMa          15.  p vF,  R,  gbM,  3rd  of  4
I2960   Gx 11 46.3   +34  59  z  UMa          16.  p F,  S,  dif,  vlbM
 3881   Gx 11 46.5   +33  07  r  UMa          15.  p vF,  R,  gbM,  4th  of  4
 3883   Gx 11 46.8   +20  42  r  Leo          14.  p vF,  cL
 3885   Gx 11 46.8   -27  55  s  Hya    1.7   13.  p cF,  vS,  vlE,  bM,  vF*  sf
 3879   Gx 11 46.9   +69  24  r  Dra          13.  p F,  pL,  mE  105deg  +/-
 3886   Gx 11 47.1   +19  51  r  Leo          14.  p F
 3887   Gx 11 47.1   -16  51  s  Crt    3.3   11.0   pB,  L,  iR,  vgpmbM
 3888   Gx 11 47.6   +55  58  s  UMa    1.8   13.  p pB,  S,  lE,  pgbM
I2961   Gx 11 47.8   +31  21  z  UMa          15.  p F,  S,  R,  lbM
 3889   Gx 11 47.9   +56  02  A  UMa          16.  p vF,  vS,  5' nf  3888
 3891   Gx 11 48.0   +30  23  r  UMa          13.  p pB,  S,  bM
 3892   Gx 11 48.0   -10  58  s  Crt    2.8   12.  p pB,  pL,  R,  gbM,  r
I 735      11 48.2   +10  13  d  Vir               eF,  S,  iF
I 736   Gx 11 48.4   +12  43  m  Leo    0.4   15.  p vF,  eS,  R
I 737   Gx 11 48.5   +12  43  m  Leo    0.6   15.  p vF,  eS,  R,  N = 14
 3893   Gx 11 48.6   +48  43  s  UMa    4.4   11.  p B,  pL,  R,  mbM
 3894   Gx 11 48.8   +59  25  s  UMa    2.4   13.  p B,  pL,  iR,  pgmbM,  p  of  2
 3896   Gx 11 48.9   +48  41  s  UMa    1.7   14.  p F,  vS
I 738      11 48.9   -04  41  d  Vir               F,  S,  R,  N = 14m
 3897   Gx 11 49.0   +35  01  s  UMa    2.1   14.  p F,  S,  R,  bM
 3895   Gx 11 49.1   +59  26  s  UMa    1.4   14.  p pF,  pL,  vlE,  gbM,  f  of  2
 3903   Gx 11 49.1   -37  30  r  Cen               pB,  cS,  vlE,  lbM
 3905   Gx 11 49.1   -09  44  s  Crt    1.8         vF,  L,  dif
I2962      11 49.1   -12  19  d  Crt               eF,  cL,  iR,  2 st  n,  f
 3898   Gx 11 49.2   +56  05  s  UMa    4.4   10.8   B,  pL,  lE,  svmbM
 3899    - 11 49.2   +26  28  r  Leo               pB,  R,  smbN;  = 3912?
 3900   Gx 11 49.2   +27  01  s  Leo    3.5   11.4   B,  pL,  vlE  0deg  +/-  ,  bMN
 3904   Gx 11 49.2   -29  17  s  Hya    2.2   11.0   pB,  S,  R,  mbM
 3902   Gx 11 49.3   +26  07  s  Leo    1.8   14.  p F,  pS,  lE,  vglbM
 3890   Gx 11 49.4   +74  20  r  Dra          14.  p vF,  S,  R,  bM
 3911   Gx 11 49.4   +24  57  r  Leo          15.  p vF,  S,  p  of  2
I2963   Gx 11 49.4   -05  07  m  Vir    1.1   14.  p v diffic,  *12  npp  20"
 3907   Gx 11 49.5   -01  04  r  Vir          14.  p eF,  S,  psbM
 3909   OC 11 49.6   -48  15  A  Cen               Cl,  vL,  lC,  st  9...14
 3906   Gx 11 49.7   +48  26  s  UMa    1.9   14.  p eF,  pL
I2964      11 49.8   +12  02  d  Leo               eeF,  eF  * 3s   f,  3' s
 3908   Gx 11 49.9   +12  11  r  Leo               F,  vS,  R,  mbM

 3172   Gx 11 50.    +89  07  s  UMi    0.7   13.6   vF,  R,  gbM,  *11  s 2',  Polarissima  Borealis
 3910   Gx 11 50.0   +21  22  r  Leo          14.  p S,  R,  mbM,  *10- 11  n 50"
 3912   Gx 11 50.1   +26  29  s  Leo    1.7   13.  p F,  pL,  R,  pgbM
 3920   Gx 11 50.1   +24  57  r  Leo          14.  p neb,  f  of  2
 3918   Pl 11 50.3   -57  11  s  Cen    0.2    8.  p PN  ,  !,  S,  R,  blue,  = *7,  d = 1s  .5
I 739      11 50.4   +23  49  d  Leo               vF,  S,  R,  *10.5  f
I2966   Nb 11 50.4   -64  54  s  Mus    3.          pL,  bM
I 741   Gx 11 50.5   -04  49  m  Vir    0.5   15.  p pB,  S,  R,  sbMN  = 12m
 3913   Gx 11 50.6   +55  21  s  UMa    2.6   13.  p F,  E
 3914   Gx 11 50.6   +06  35  r  Vir          14.  p F,  vS,  R,  lbM,  *13  np  80"
 3915    - 11 50.6   -05  08  r  Vir               eF,  eS,  bet  2 st
 3919   Gx 11 50.6   +20  01  r  Leo          14.  p F,  S,  R
I 740   Gx 11 50.6   +55  21  t  UMa    2.7   13.  p eeF,  pL,  iR,  3916  s;  = 3913
 3916   Gx 11 50.8   +55  09  s  UMa    1.8   15.  p eF,  R,  gbM
 3917   Gx 11 50.8   +51  50  s  UMa    4.9   12.  p F,  L,  vmE,  vgbM
I2967   Gx 11 50.8   +30  52  m  UMa    0.3   15.  p pB,  vS,  stell  N
 3960   OC 11 50.9   -55  42  s  Cen    7.     8.3   Cl,  pL,  pRi,  gpnbM,  st  13
 3923   Gx 11 51.0   -20  48  s  Hya    2.9   10.1   B,  pL,  lE,  gmbM,  r,  vS*  sp  inv
I 742   Gx 11 51.0   +20  48  u  Leo    1.3   15.  p eeF,  pS,  R,  pB*  sp
 3921   Gx 11 51.1   +55  05  s  UMa    2.2   13.  p pF,  S,  R,  pspmbM
 3922   Gx 11 51.2   +50  11  r  UMa          14.  p vF,  vS
 3931   Gx 11 51.2   +52  00  s  UMa    1.4   15.  p eF,  S
 3925   Gx 11 51.3   +21  55  r  Leo          15.  p vF,  vS
 3942   Gx 11 51.4   -11  24  r  Crt          14.  p eF,  pS,  E  160deg  ,  gvlbM
 3926   Gx 11 51.5   +22  03  r  Leo          14.  p eF,  eS,  vlE,  er,  st  nr
 3927    - 11 51.6   +28  09  r  Leo               pF,  pS
 3929   Gx 11 51.7   +21  01  r  Leo          14.  p Cl,  S,  st  F,  vC
 3928   Gx 11 51.8   +48  41  s  UMa    1.8   13.  p pF,  S,  R,  pspmbM
 3930   Gx 11 51.8   +38  01  s  UMa    3.8   12.  p eF,  cL,  iF,  glbM,  *7  (Grb  1830)  f
 3933   Gx 11 52.0   +16  49  r  Leo          14.  p pF,  lE
 3934   Gx 11 52.2   +16  52  r  Leo          15.  p eF,  R
 3936   Gx 11 52.3   -26  54  s  Hya    4.0   13.  p vF,  cL,  vmE  59deg
 3935   Gx 11 52.4   +32  25  r  UMa          14.  p pF,  S,  lE,  psbM
 3932   Gx 11 52.5   +48  28  r  UMa          15.  p vF,  v diffic,  3928  np
 3924   Gx 11 52.6   +50  01  s  UMa    1.9   15.  p pB,  S,  iF,  bM
I2968   Gx 11 52.6   +20  36  m  Leo    0.4   14.  p eF,  vS,  3937  f  12s
I2969   Gx 11 52.6   -03  52  F  Vir               eF,  pS,  R,  B* f  55s  ,  np  of  2
 3937   Gx 11 52.7   +20  39  r  Leo          14.  p vF,  cS,  R;  = IC  2968
 3940   Gx 11 52.7   +21  01  r  Leo          14.  p vF,  cS,  R
 3938   Gx 11 52.8   +44  07  s  UMa    5.4   10.4   B,  vL,  R,  bMpBN,  er
 3941   Gx 11 52.9   +36  59  s  UMa    3.8   11.  p vB,  pL,  R,  smbM  *9
 3943   Gx 11 52.9   +20  30  r  Leo          14.  p pF,  pS,  E,  *8  p  24s
 3944   Gx 11 53.1   +26  14  r  Leo          14.  p pF,  pS,  R,  psbM
 3939    - 11 53.2   +75  07  r  Dra               eF,  vS,  R  (place  doubtful)
 3945   Gx 11 53.2   +60  41  s  UMa    5.5   10.6   B,  pL,  R,  gmbM,  r,  *12  sp
I2970   *** 11 53.2   -23  07  x  Crt               pB,  S,  R,  3955  f
 3946   Gx 11 53.4   +21  03  r  Leo          15.  p vF,  vlbM,  dif
 3947   Gx 11 53.4   +20  45  s  Leo    1.6   14.  p F,  pS,  iE,  lbM,  **   p
 3948   Gx 11 53.4   +20  59  m  Leo    0.5   15.  p vF,  stellar
I 743      11 53.4   -13  16  d  Crt               F,  S,  dif
I2971   Gx 11 53.5   +30  41  z  UMa          16.  p F,  S,  R,  psbM
 3949   Gx 11 53.7   +47  52  s  UMa    3.0   11.0   cB,  pL,  pmE,  vgbM
 3950   Gx 11 53.7   +47  56  r  UMa          15.  p eF,  2'.6  n  of  3949
 3951   Gx 11 53.7   +23  24  r  Leo          14.  p vF,  cS,  vlE
 3952   Gx 11 53.7   -04  00  s  Vir    1.5   13.  p cF,  cS,  lE  90deg  +/-  ,  bM,  r
 3954   Gx 11 53.7   +20  54  r  Leo          14.  p eF,  R
I2972   Gx 11 53.7   -03  59  m  Vir    0.9   14.  p vF,  pS,  R,  2 B st  n,  np,  sf  of  2
 3953   Gx 11 53.8   +52  20  s  UMa    6.6   10.1   cB,  L,  E  0deg  +/-  ,  vsbMLrN
I2973   Gx 11 53.8   +33  21  u  UMa    1.5   14.  p F,  cS,  dif
I2974   Gx 11 53.9   -05  09  v  Vir    2.8         eeF,  vS,  lE
 3955   Gx 11 54.0   -23  10  s  Crt    3.2   11.9   cF,  S,  E  170deg  +/-  ,  lbs
 3956   Gx 11 54.0   -20  34  s  Crt    3.5   13.  p cF,  pL,  pmE  57deg
 3957   Gx 11 54.0   -19  34  s  Crt    3.5   13.  p F,  S,  E,  r
I2965   Gx 11 54.0   -19  34  c  Crt    2.5         B,  S,  vmE,  ray;  = 3957
I 744   Gx 11 54.1   +23  12  z  Leo          16.  p eF,  vS,  v diffic
I2975      11 54.2   -05  47  d  Vir               eeF,  vS,  lE,  3 B st  in  line  n,  circle  of  st
    n
I 745   Gx 11 54.3   +00  08  s  Vir    0.7   14.  p F,  vS,  stellar,  N = 14
I2976      11 54.5   -02  43  d  Vir               vF,  vS,  R,  vF*  nr  nf
 3958   Gx 11 54.6   +58  22  s  UMa    1.6   13.  p pF,  pS,  pmE,  vgbM
 3959   Gx 11 54.6   -07  44  r  Crt          14.  p vF,  S,  bet  2 vF  st
 3962   Gx 11 54.7   -13  58  s  Crt    2.9   10.6   cB,  pL,  iR,  gmbM,  triangle  2 st
 3964   Gx 11 54.8   +28  16  r  Leo          15.  p vF,  S,  E,  *10  nf  att
 3961   Gx 11 55.0   +69  20  r  Dra          14.  p eF,  vS
 3963   Gx 11 55.0   +58  30  s  UMa    2.8   12.  p pF,  cL,  R,  vg,  sbM
 3965    - 11 55.1   -10  52  r  Crt               eF,  eS,  R,  bMN,  *9.5  np  4'
 3969   Gx 11 55.1   -18  56  r  Crt          14.  p eF,  vS,  gbMN,  *8.5  nearly  n
 3967   Gx 11 55.2   -07  50  r  Crt          15.  p vF,  S,  F*  close  p
I2977   Gx 11 55.2   -37  42  c  Cen    2.0         eF,  vS,  *7  sp
 3970   Gx 11 55.3   -12  02  r  Crt          14.  p F,  S,  R,  psbM,  p  of  2
 3968   Gx 11 55.5   +11  58  s  Leo    3.0   13.  p pB,  L,  iR,  bM,  *10,  65deg  ,  3'
 3971   Gx 11 55.6   +30  00  r  UMa          14.  p pF,  vS,  R,  bM
 3973   Gx 11 55.6   +12  01  r  Leo          15.  p eF,  eS,  *10  1'  sf  (requires  verification)
I 746   Gx 11 55.6   +25  53  u  Leo    1.3   14.  p F,  pS,  R
 3966   Gx 11 55.7   +32  12  r  UMa          14.  p F,  pL,  lE,  bM,  *12  p
 3974   Gx 11 55.7   -12  00  r  Crt          14.  p vF,  S,  R,  bM,  f  of  2
 3972   Gx 11 55.8   +55  19  s  UMa    4.0   13.  p pB,  E
 3975   Gx 11 55.9   +60  32  s  UMa    0.8   15.  p vF,  vS,  3978  f  17s
 3976   Gx 11 56.0   +06  45  s  Vir    3.9   12.  p B,  pL,  cE  30deg  ,  vsmbMN
 3977   Gx 11 56.1   +55  24  s  UMa    1.7   13.  p F,  S
 3979   Gx 11 56.1   -02  42  r  Vir          14.  p pF,  *11- 12  nf
 3980   Gx 11 56.1   +55  23  u  UMa    1.8   15.  p eF,  pL,  E,  D*  nr
 3981   Gx 11 56.1   -19  54  s  Crt    3.9   12.  p vF,  pL,  iF
 3978   Gx 11 56.2   +60  31  s  UMa    1.8   15.  p cF,  S,  lE,  bM,  *8,  90deg  ,  6'
 3983   Gx 11 56.4   +23  53  r  Leo          15.  p cF,  cS,  R,  psbM
I2978   Gx 11 56.4   +32  01  u  UMa    1.1   15.  p vF,  S,  v dif
 3982   Gx 11 56.5   +55  08  s  UMa    2.5   12.  p B,  pL,  R,  g,  sbM  disc
 3985   Gx 11 56.7   +48  20  s  UMa    1.2   13.  p vF,  cS,  another  suspected
 3986   Gx 11 56.7   +32  01  s  UMa    3.1   14.  p pF,  S,  pmE  90deg  +/-  ,  *11  nr
I2979      11 56.9   +33  09  d  UMa               F,  S,  R,  lbM,  r
I 747      11 57.1   -08  18  d  Vir               F,  vS,  R,  stellar
 3987   Gx 11 57.3   +25  12  s  Leo    2.5   14.  p F,  mE
 3988   Gx 11 57.4   +27  53  r  Leo          14.  p vF,  S,  R,  bM  *,  p  of  2
 3989   Gx 11 57.4   +25  14  r  Leo          15.  p eF,  vS,  R
 3991   Gx 11 57.5   +32  20  s  UMa    1.4   13.2   F,  S,  lE,  1st  of  3
I 748   Gx 11 57.5   +07  28  m  Vir    0.3   15.  p F,  vS,  R,  sbMN  = 13
I2980   Gx 11 57.5   -73  41  c  Mus    2.0         eeF,  eS,  R,  cbM
 3990   Gx 11 57.6   +55  28  s  UMa    1.7   12.6   pF,  S,  lE,  pslbM
 3992   Gx 11 57.6   +53  23  s  UMa    7.6    9.8   cB,  vL,  pmE,  sbMBrN;  = M109
 3993   Gx 11 57.6   +25  15  s  Leo    1.9   15.  p vF,  pS,  E,  3 st  nr
 3994   Gx 11 57.6   +32  17  s  UMa    1.1   12.7   pB,  vS,  2nd  of  3
 3995   Gx 11 57.7   +32  18  s  UMa    2.8   12.6   F,  pL,  iR,  bM,  3rd  of  3
 3984   Gx 11 57.8   +29  03  r  UMa          15.  p eF,  S,  R,  bM
 3996   Gx 11 57.8   +14  19  r  Leo          14.  p vF,  pL,  R,  2 st  f
 3997   Gx 11 57.8   +25  16  s  Leo    1.8   14.  p pF,  vS,  E  25deg  ,  bet  2 st
I2981      11 57.8   +33  11  d  UMa               F,  S,  R,  gvlbM
I2982      11 57.8   +27  49  d  Leo               vF,  stell,  *10  nr
 3998   Gx 11 57.9   +55  27  s  UMa    3.1   10.6   cB,  pS,  R,  vg,  smbM
 4000   Gx 11 58.0   +25  09  r  Leo          15.  p vF,  vS,  lE,  *8  2'  f,  4005  is  sf
 4002   Gx 11 58.0   +23  13  r  Leo          14.  p vF,  vS,  R,  n  of  2
 4003   Gx 11 58.0   +23  08  r  Leo          15.  p vF,  vS,  R,  s  of  2
 4001   Gx 11 58.1   +47  20  r  UMa          15.  p S,  R,  7'  np  4010
 4004   Gx 11 58.1   +27  53  s  Leo    2.2   14.  p F,  vS,  R,  *12  near
 4005   Gx 11 58.2   +25  08  r  Leo          14.  p pF,  vS,  mbM,  *7  np  2'
 4006   Gx 11 58.2   -02  05  r  Vir          14.  p F,  S,  R,  bM,  *11  nf;  = IC  2983
 4007      11 58.2   +25  08  A  Leo               eF,  vS;  = 4005
 4008   Gx 11 58.3   +28  12  s  Leo    2.5   12.0   pB,  pS,  E,  psbM,  *  inv  n
I2983    * 11 58.3   -02  05  F  Vir               eF
 3999   Gx 11 58.4   +25  09  r  Leo          15.  p vF,  S
 4009   Gx 11 58.4   +25  13  r  Leo               vF,  eS
 4011   Gx 11 58.4   +25  07  r  Leo          15.  p vF,  vS,  *12  np
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 4016   Gx 11 58.4   +27  31 s  Leo     1.5   15.  p vF
 4012   Gx 11 58.5   +10  02 r  Vir           14.  p vF,  S,  lE
 4013   Gx 11 58.5   +43  57 s  UMa     5.2   12.  p B,  cL,  mE  62deg  , vsvmbM  *10
 4024   Gx 11 58.5   -18  21 s  Crv     2.3   13.  p F,  vS,  iF,  bM
 4019   Gx 11 58.6   +47  16 s  UMa     4.2   13.  p F,  pL,  mE,  vglbM
 4014   Gx 11 58.6   +16  11 r  Com           13.  p pB,  pS,  R,  psbM
I 749   Gx 11 58.6   +42  44 s  UMa     2.5   12.2  pB,  L,  R,  lbM
 4015   Gx 11 58.7   +25  03 r  Com           14.  p F,  vS,  E,  mbM
 4017   Gx 11 58.7   +27  26 s  Com     1.8   13.  p F,  L,  E,  gbfM
 4018   Gx 11 58.7   +25  20 r  Com           14.  p mE  np  sf,  2 st  s
 4019    - 11 58.9   +14  13 r  Com                 eF,  *9  sf  5'
 4020   Gx 11 58.9   +30  25 s  UMa     2.1   13.  p pB,  pL,  E  20deg  , biN
I 750   Gx 11 58.9   +42  43 s  UMa     2.9   11.8  pB,  L,  lE  35deg  , bM
I 751   Gx 11 58.9   +42  34 v  UMa     1.5         pF,  pL,  lE  45deg  , mbM
 4021   Gx 11 59.0   +25  06 r  Com           15.  p F,  S,  vlE
 4022   Gx 11 59.0   +25  14 r  Com           14.  p pF,  vS,  stellar
 4023   Gx 11 59.1   +25  00 r  Com           14.  p pF,  pL,  dif
I2984       11 59.1   +30  42 d  UMa                 F,  cS,  R,  vlbM
 4025   Gx 11 59.2   +37  48 s  UMa     3.3   15.  p eF,  pL,  R
I 753   Gx 11 59.2   -00  30 u  Vir     0.6   14.  p pB,  vS,  R,  vmbM,  *11  nf
I2985       11 59.2   +30  44 d  UMa                 pF,  S,  dif
I 752   Gx 11 59.3   +42  33 z  UMa           15.  p vF,  S,  iR,  *13  nf  1'.5
 4026   Gx 11 59.4   +50  58 s  UMa     5.1   12.  p vB,  cL,  mE  176deg  , vsvmbMBN
I 754   Gx 11 59.4   -01  38 u  Vir     0.9   14.  p F,  S,  R,  sbM
 4027   Gx 11 59.5   -19  16 s  Crv     3.0   11.1  glob.  cl.  , pF,  pL,  R,  rr,  st  16
I2986   Gx 11 59.8   +30  52 m  UMa     0.6   15.  p F,  vS,  R,  N,  r
 4028    - 11 59.9   +16  14 r  Com                 vF,  vS,  vlE,  r
 4029   Gx 12 00.1   +08  12 r  Vir           14.  p vF,  vS,  lE,  stellar  N
 4030   Gx 12 00.4   -01  06 s  Vir     4.3   12.  p cB,  L,  vlE,  psmbM,  B st  nr
 4031   Gx 12 00.5   +31  57 r  UMa           14.  p eF,  vS,  *17  vnr  south
 4035   Gx 12 00.5   -15  57 v  Crv     1.4         eF,  pL,  *9  45deg  +/-
 4032   Gx 12 00.6   +20  04 s  Com     2.1   13.  p pF,  pL,  R,  gbM,  *12  nf
 4033   Gx 12 00.6   -17  51 s  Crv     2.5   13.  p pB,  S,  lE,  bM
I 755   Gx 12 01.2   +14  06 v  Com     2.7         eeF,  S,  E,  bet  2 st
 4036   Gx 12 01.4   +61  54 s  UMa     4.5   10.6  vB,  vL,  E
 4037   Gx 12 01.4   +13  24 s  Com     2.7   13.  p eF,  pL,  R,  r
 4034   Gx 12 01.5   +69  19 r  Dra                 eF,  S,  iF,  gvlbM
 4038   Gx 12 01.9   -18  52 s  Crv     2.6   10.7  pB,  cL,  R,  vgbM
 4039   Gx 12 01.9   -18  53 s  Crv     3.2   13.  p pF,  pL
 4052   OC 12 01.9   -63  12 s  Cru     8.     9.  p Cl,  pRi,  lC
 4040   Gx 12 02.2   +17  50 r  Com           15.  p eF,  pS,  R,  3 st  nr
 4041   Gx 12 02.2   +62  08 s  UMa     2.8   11.1  B,  cL,  R,  g,  psvmbMrN
 4042    - 12 02.4   +20  09 r  Com                 vF,  vS;  = 4032?
 4043   Gx 12 02.4   +04  21 r  Vir           14.  p pF,  S,  R,  psbM,  **  f  30s
 4044   Gx 12 02.5   -00  11 r  Vir           14.  p cF,  cS,  R,  bM
 4045   Gx 12 02.7   +01  59 s  Vir     2.8   11.8  pF,  L,  R,  sbM,  * sf
 4046    - 12 02.8   +01  45 r  Vir                 F,  pS,  triangle  2 F st;  = 4045?
 4047   Gx 12 02.9   +48  38 s  UMa     1.5   13.  p pB,  pS,  R
 4048   Gx 12 02.9   +18  01 r  Com           14.  p vF,  vS,  R,  psbM
 4050   Gx 12 02.9   -16  22 s  Crv     3.1   12.  p F,  cL,  iR,  lbM
 4049   Gx 12 03.0   +18  46 r  Com           14.  p eF,  pS,  R,  glbM
I 756   Gx 12 03.0   +04  50 u  Vir     2.1   15.  p vF,  pL
 4051   Gx 12 03.2   +44  32 s  UMa     5.0   10.3  B,  vL,  E,  vgvsmbM  *11
 4053   Gx 12 03.2   +19  44 r  Com           14.  p F,  vS,  vlE,  alm  stell
 4054   Gx 12 03.2   +57  54 r  UMa           15.  p eF,  S
I 757   D* 12 03.4   +52  39 x  UMa           13.  p susp,  close  to  *12
I2987   Gx 12 03.4   +38  49 v  UMa                 F,  S,  N,  dif
 4055    - 12 03.7   +21  04 r  Com                 pB  (decl  very  doubtful)
I2988       12 03.7   +03  24 d  Vir                 eF,  r,  *11.5  sf  2'.7
 4058   Gx 12 03.8   +03  34 r  Vir           14.  p vF,  pS,  R,  bM
 4059    - 12 03.9   +21  19 r  Com                 pB  (decl  very  doubtful)
 4056   Gx 12 04.0   +20  19 r  Com                 eF,  vS
 4068   Gx 12 04.0   +52  35 s  UMa     3.2   13.  p pF,  S,  stellar
 4060   Gx 12 04.1   +20  21 r  Com           15.  p eF
 4061   Gx 12 04.1   +20  13 s  Com     1.5   14.  p vF,  S,  R,  p of  Dneb,  pos  80deg
 4062   Gx 12 04.1   +31  54 s  UMa     4.3   11.2  pB,  vL,  mE  97deg  , vgbM
 4063   Gx 12 04.1   +01  52 r  Vir           15.  p eF,  vS,  B pts  inv
 4064   Gx 12 04.2   +18  27 s  Com     4.5   11.5  B,  E,  gbM
 4065   Gx 12 04.2   +20  13 s  Com     1.5   14.  p pF,  R,  f of  Dneb
 4066   Gx 12 04.2   +20  22 r  Com           14.  p pB
 4067   Gx 12 04.2   +10  51 s  Vir     1.5   13.  p F,  pS,  R,  gbM
 4069   Gx 12 04.2   +20  20 r  Com                 vF,  vS
 4070   Gx 12 04.2   +20  26 r  Com           14.  p F,  vS
 4071   Pl 12 04.2   -67  18 s  Mus     1.3         vF,  vS,  R,  bM*,  am  st
I 758   Gx 12 04.2   +62  30 s  UMa     2.0   13.  p eeF,  pS,  R,  bet  2 distant  st
 4072   Gx 12 04.3   +20  13 r  Com           15.  p eF,  sf  4061,  4062,  4065
 4073   Gx 12 04.5   +01  54 s  Vir     2.5   13.  p F,  pS,  R,  pgbN,  np  of  2
 4074   Gx 12 04.6   +20  20 r  Com           15.  p eF,  vS
 4076   Gx 12 04.6   +20  12 r  Com           14.  p vF,  vS
 4081   Gx 12 04.6   +64  26 s  UMa     1.8   14.  p F,  S,  mE,  D*  nr
 4075   Gx 12 04.7   +02  05 r  Vir           14.  p F,  S,  R
 4077   Gx 12 04.7   +01  48 r  Vir           14.  p cF,  cS,  vlE,  bM,  sf  of  2
I2989   Gx 12 04.7   +01  47 u  Vir     1.1   14.  p vF,  S,  bN  or  2  or  3  eF  st  inv
I2990   Gx 12 04.7   +11  02 m  Vir     0.6   15.  p eF,  R,  poss  PN
 4078   Gx 12 04.8   +10  36 r  Vir           14.  p F,  vS,  R,  glbM
 4079   Gx 12 04.8   -02  23 s  Vir     2.4   14.  p F,  L,  R,  *10  n  1'
 4080   Gx 12 05.0   +27  00 r  Com           14.  p cF,  pS,  E,  gbM
I2991       12 05.1   +10  37 d  Vir                 eF,  S,  E  10deg  , bet  4082  and  83
I 759       12 05.2   +20  15 d  Com                 pB,  pL,  E  pf
I2992       12 05.2   +30  21 d  UMa                 F,  S,  R,  gbMN,  r
I2993       12 05.2   +32  52 d  UMa                 F,  S,  N,  dif,  r
 4057   Gx 12 05.3   +20  19 r  Com                 pB  (decl  very  doubtful)
 4082   Gx 12 05.3   +10  41 r  Vir           15.  p vF,  vS,  lE,  lbM
 4083   Gx 12 05.3   +10  37 r  Vir           15.  p eF,  vS
 4084   Gx 12 05.3   +21  14 r  Com           15.  p F,  S
 4085   Gx 12 05.4   +50  21 s  UMa     2.8   12.3  B,  pL,  pmE  78deg  , vsbM
 4086   Gx 12 05.5   +20  15 r  Com           15.  p F,  pS,  R
 4090   Gx 12 05.5   +20  19 r  Com           15.  p vF,  vS,  *15  f  1';  = IC  2997
I2994   Gx 12 05.5   +12  41 z  Vir           16.  p eF,  R,  bM
 4087   Gx 12 05.6   -26  33 r  Hya           13.  p pB,  S,  R,  bM
 4088   Gx 12 05.6   +50  33 s  UMa     5.8   10.5  B,  cL,  E  55deg  , lbM
 4089   Gx 12 05.6   +20  34 r  Com           15.  p vF,  S,  R,  p of  2
 4091   Gx 12 05.7   +20  34 r  Com           15.  p vF,  S,  R,  f of  2
I2995   Gx 12 05.8   -27  56 s  Hya     3.1   13.  p vF,  L,  cE  120deg  , *8  f
I2997       12 05.8   +20  17 d  Com                 eF,  *12  sf  2';  = 4090?
 4092   Gx 12 05.9   +20  30 r  Com           14.  p F,  pS,  R,  *11  np
 4093   Gx 12 05.9   +20  33 r  Com           15.  p eF,  vS
 4094   Gx 12 05.9   -14  32 s  Crv     4.2   12.  p eF,  L,  pmE,  vgbM,  2 st  11  nr
I 760   Gx 12 05.9   -29  18 c  Hya     1.6         F,  S,  R,  bM,  E  150deg  ?
I2996   Gx 12 05.9   -30  00 m  Hya     0.8   14.  p F,  vS,  E  20deg  , * sp
I2998       12 05.9   +20  45 d  Com                 vF,  others  near
I2999   Gx 12 05.9   +31  21 z  UMa           16.  p vF,  vS,  N
 4095   Gx 12 06.0   +20  35 r  Com           14.  p vF,  vS
 4096   Gx 12 06.0   +47  29 s  UMa     6.5   10.6  pB,  vL,  mE  32deg
I 761   Gx 12 06.0   -12  40 m  Crv     0.6   15.  p neb  *14
 4097   Gx 12 06.1   +36  52 r  UMa           14.  p eF,  vS,  R,  stellar,  *10  sp  2'
 4098   Gx 12 06.1   +20  37 r  Com           14.  p eF,  eS,  R,  bM
 4099    - 12 06.1   +20  39 r  Com                 eF,  eS
I3000       12 06.1   -29  41 d  Hya                 F,  indistinct  (defect?)
 4100   Gx 12 06.2   +49  35 s  UMa     5.2   12.  p pB,  vL,  vmE  161deg  , vgvlbM
 4101   Gx 12 06.2   +25  34 r  Com           14.  p eF,  vS,  R,  vgbM
I3001   Gx 12 06.2   +33  31 m  UMa     0.7   15.  p F,  S,  R,  gbM
 4102   Gx 12 06.4   +52  43 s  UMa     3.2   12.  p B,  pS,  R,  bMBN,  *12  sp,  vnr
 4104   Gx 12 06.6   +28  10 s  Com     3.0   14.  p pB,  pS,  lE,  bM
 4103   OC 12 06.7   -61  15 s  Cru     7.     7.  p Cl,  pL,  pC,  iR,  st  10...14
 4105   Gx 12 06.7   -29  46 s  Hya     2.4   12.  p pF,  pS,  R,  psbM,  r,  p  of  2
 4107       12 06.7   +10  36 D  Vir                 pB,  S,  lE,  *10-  11  np
 4106   Gx 12 06.8   -29  46 s  Hya     1.9   11.4  pF,  pS,  R,  pgbN,  f  of  2
 4108   Gx 12 06.8   +67  10 s  Dra     1.9   13.  p B,  S,  R,  gbM
 4109   Gx 12 06.9   +43  00 s  CVn     0.8   15.  p vF,  4111  nnf  6'
 4110   Gx 12 07.1   +18  32 r  Com           14.  p F,  S
 4111   Gx 12 07.1   +43  04 s  CVn     4.8   10.8  vB,  pS,  mE  151deg
 4112   Gx 12 07.1   -40  11 r  Cen                 F,  S,  vlE,  glbM,  3 B st  nr
I3002   Gx 12 07.1   +33  22 m  CVn     0.5   15.  p F,  cS,  R,  gbM,  r
I3003       12 07.1   +32  51 d  Com                 F,  S,  dif,  N,  r
 4113    - 12 07.2   +34  00 r  CVn                 eF;  nonexistent?
 4114   Gx 12 07.2   -14  11 s  Crv     2.3   13.  p cF,  S,  iR,  gbM
 4115    - 12 07.2   +14  25 r  Com                 eF,  suspected
 4122   Gx 12 07.2   +33  00 r  Com           15.  p eF,  vS,  R,  mbM
I3004   Gx 12 07.2   +13  14 m  Vir     0.9   16.  p R,  bM,  mag  15
I3005   Gx 12 07.2   -30  01 c  Hya     2.2         F,  S,  eE  160deg  , stell  N
I3006       12 07.4   +12  59 d  Vir                 R,  bM,  mag  15
I3007   Gx 12 07.4   +31  21 z  Com           15.  p vF,  vS,  diffic
 4116   Gx 12 07.6   +02  42 s  Vir     3.8   11.9  vF,  E  (hook  shape),  sp  of  2
 4117   Gx 12 07.8   +43  08 s  CVn     2.8   14.  p vF,  vS
 4118   Gx 12 07.9   +43  07 s  CVn     0.9   16.  p eF,  vS,  1' s  of  4117
 4119    - 12 07.9   +09  33 r  Vir                 lE;  nonexistent?
 4121   Gx 12 07.9   +65  07 s  Dra     0.6   14.  p F,  vS,  lE,  r
I3010   Gx 12 07.9   -30  20 c  Hya     1.9         eF,  cS,  R,  2 st  10  sf  8'
I3008   Gx 12 08.0   +13  33 m  Com     0.8   15.  p R,  bM,  mag  13.5
I3009    ? 12 08.0   +12  39 x  Vir                 pB,  cS
 4125   Gx 12 08.1   +65  11 s  Dra     5.1    9.8  pB,  pL,  cE,  mbM
I 762   Gx 12 08.1   +25  45 m  Com     0.6   15.  p pB,  S,  R,  N  =  12m
 4123   Gx 12 08.2   +02  53 s  Vir     4.5   11.2  cF,  vL,  E  90deg  +/-  , bMN
 4124   Gx 12 08.2   +10  23 s  Vir     4.6   12.  p pB,  pL,  mE  118deg  , bM,  r;  = IC  3011
I 763   Gx 12 08.2   +25  49 m  Com     0.8   15.  p F,  vS,  N  =  13m
I3011   Gx 12 08.2   +10  22 t  Vir     3.8   12.  p pF,  pS,  E  110deg  ; = 4124
 4127   Gx 12 08.4   +76  48 s  Cam     2.3   13.  p F,  pL,  vlE,  glbM
 4120   Gx 12 08.5   +69  33 s  Dra     1.9   14.  p eF,  vS,  E
 4128   Gx 12 08.5   +68  46 s  Dra     2.8   13.  p cB,  lE,  bM
I3012   Gx 12 08.5   +11  10 z  Vir           15.  p R,  PN ?,  mag  15
I3013   Gx 12 08.5   +10  01 m  Vir     0.8   15.  p bM,  mag  15
I3014   Gx 12 08.5   +38  49 u  CVn     1.1   14.  p pB,  cS,  R,  gbM,  r
 4133   Gx 12 08.6   +74  56 r  Dra           13.  p pB,  cL,  R,  gmbM
 4126   Gx 12 08.7   +16  09 r  Com           14.  p vF,  S,  R,  psbM,  bet  2 vS  st
 4131   Gx 12 08.7   +29  18 s  Com     1.6   14.  p cF,  S,  R,  1st  of  3
 4129   Gx 12 08.9   -09  02 s  Vir     2.6   12.6  F,  pL,  pmE  95deg  +/-  , vglbM
 4130    - 12 08.9   -04  00 r  Vir                 pE,  lbM,  *13  p  5'
 4132   Gx 12 09.0   +29  14 s  Com     1.1   15.  p cF,  S,  iR,  2nd  of  3
I3015   Gx 12 09.0   -31  31 c  Hya     3.0         pB,  mE  45deg  , *10.5  sf  1'
 4134   Gx 12 09.2   +29  11 r  Com           14.  p pF,  pL,  lE,  3rd  of  3
 4135   Gx 12 09.2   +44  00 s  CVn     1.0   15.  p vF,  pS,  R,  2 F st  inv
 4136   Gx 12 09.3   +29  56 s  Com     4.1   12.  p F,  vL,  vgmbM
 4137   Gx 12 09.3   +44  06 s  CVn     1.2   15.  p vF,  pS,  R,  l fainter  than  4135
I3016   Gx 12 09.4   +11  25 z  Vir           16.  p S,  R,  bM
I3017       12 09.4   +13  36 d  Com                 R,  bM,  dif,  mag  14.5
I3019   Gx 12 09.4   +14  00 x  Com                 R,  bM,  dif,  mag  14.5
 4138   Gx 12 09.5   +43  41 s  CVn     2.9   12.  p B,  pL,  lE,  vgbM,  * np
 4142   Gx 12 09.5   +53  06 s  UMa     2.3   14.  p vF,  S,  iF,  vglbM,  er
I3018    ? 12 09.5   +14  04 x  Com                 R,  lbM,  mag  13.5
 4139    - 12 09.6   +01  49 r  Vir                 F,  S,  diffic,  p  of  Dneb
 4143   Gx 12 09.6   +42  32 s  CVn     2.9   12.  p cB,  R,  vg,  vsbMN
I3020       12 09.6   +14  13 d  Com                 R,  bM,  mag  14
 4140    - 12 09.7   +01  48 r  Vir                 F,  S,  diffic,  f  of  Dneb
 4141   Gx 12 09.7   +58  51 r  UMa           14.  p vF,  pS,  lE,  gbM,  r
I3022   Gx 12 09.9   +38  43 m  CVn     0.2   14.  p pB,  pS,  gbM
 4144   Gx 12 10.0   +46  27 s  UMa     5.9   12.  p pF,  cL,  vmE  109deg  , vgbM
 4145   Gx 12 10.0   +39  53 s  CVn     5.8   11.0  B,  vL,  vglbM
I3021   Gx 12 10.0   +13  01 u  Vir     1.8   15.  p R,  bM,  v  dif,  mag  14.5
 4147   Gb 12 10.1   +18  33 s  Com     4.0   10.3  glob.  cl.  , vB,  pL,  R,  gbM,  rrr
 4148   Gx 12 10.1   +35  52 s  CVn     1.8   15.  p F,  S,  *12  sf
I3023       12 10.1   +14  21 d  Com                 R,  bM,  dif,  mag  15
I 764   Gx 12 10.2   -29  44 s  Hya     4.8   12.  p eF,  pL,  E  ns,  lbM
 4146   Gx 12 10.3   +26  26 s  Com     1.6   14.  p vF,  pS
I3024   Gx 12 10.3   +12  18 u  Vir     1.2   15.  p R,  bM,  mag  13.5
 4149   Gx 12 10.4   +58  19 r  UMa           14.  p F,  S,  E
I3025   Gx 12 10.4   +10  11 m  Vir     0.4   15.  p S,  E,  bM
 4151   Gx 12 10.5   +39  24 s  CVn     5.9   10.4  vB,  S,  R,  vsmbMBN,  p  of  2
I 765   D* 12 10.5   +16  08 x  Com                 vF,  susp  6'  n  of  4152
I3027    ? 12 10.5   +14  11 x  Com                 bM,  mag  14
I3028       12 10.5   +11  45 d  Vir                 bM,  mag  15
 4150   Gx 12 10.6   +30  24 s  Com     2.5   11.7  B,  S,  R,  pgmbM
 4152   Gx 12 10.6   +16  02 s  Com     2.3   12.0  pB,  pL,  R,  pgmbM,  r
I3026    * 12 10.6   -29  56 x  Hya                 vF,  vS,  mE  40deg  , bet  2 st
 4154    * 12 10.7   +58  21 r  UMa                 vF,  S,  E  90deg  +/-
 4159   Gx 12 10.7   +76  09 r  Dra           14.  p eF,  pS,  R,  triangle  2 st
 4153    - 12 10.8   +18  22 r  Com                 B,  pL,  E,  bM
 4155   Gx 12 10.8   +19  03 r  Com           14.  p eF,  vS
 4156   Gx 12 10.8   +39  28 s  CVn     1.5   13.0  pF,  S,  E,  vgbM,  f  of  2
I3029   Gx 12 10.8   +13  19 u  Com     1.5   15.  p E  35deg  , mag  13.5
I 766   Gx 12 10.9   -12  40 m  Crv     1.2   14.  p pB,  E  ns,  sbMN  =  14m
 4157   Gx 12 11.1   +50  29 s  UMa     6.9   12.  p pF,  cL,  vmE  60deg  +/-  (double?)
I 767   Gx 12 11.1   +12  05 m  Vir     0.6   15.  p F,  vS,  stell,  N  =  14m
I3030       12 11.1   +14  08 d  Com                 R,  bM,  mag  14
I3031       12 11.1   +13  18 d  Vir                 vF,  wisp  at  35deg
I3032   Gx 12 11.1   +14  16 z  Com           15.  p R,  bM,  mag  13.5
I3033   Gx 12 11.1   +13  35 u  Com     1.2   15.  p bM,  wisps  ns  0'.5,  mag  13.5
 4158   Gx 12 11.2   +20  11 s  Com     2.0   13.  p F,  pS,  lE,  bM,  pB*  sf
 4161   Gx 12 11.4   +57  44 r  UMa           13.  p F,  S,  R
 4160    - 12 11.6   +43  45 r  CVn                 neb  *13
 4162   Gx 12 11.9   +24  07 s  Com     2.5   11.5  B,  L,  iE,  bM
I 768   Gx 12 11.9   +12  08 u  Vir     1.6   15.  p vF,  pS,  R,  gbM
I3034       12 11.9   +14  11 d  Com                 vF,  E,  bM
 4164   Gx 12 12.1   +13  12 r  Vir           15.  p vF,  2'-3' s  of  4165
 4163   Gx 12 12.2   +36  10 s  CVn     1.9   13.  p vF,  pL,  vlE,  r
 4165   Gx 12 12.2   +13  15 s  Vir     1.5   13.6  eF,  *10  np,  4168  f;  = IC  3035
 4166   Gx 12 12.2   +17  46 r  Com           14.  p vF,  S
 4167    - 12 12.2   +36  31 r  CVn                 F,  pL,  R,  vgbM,  **  s;  = 4163?
 4169   Gx 12 12.2   +29  10 s  Com     2.1   13.  p F,  S,  1st  of  4
 4172   Gx 12 12.2   +56  11 r  UMa           14.  p F,  S,  lE,  gbM
I3035       12 12.2   +13  15 x  Vir                 F,  cS;  = 4165
I3036   Gx 12 12.2   +12  28 u  Vir     1.8   15.  p vF,  spir
 4168   Gx 12 12.3   +13  12 s  Vir     2.8   11.3  pB,  pL,  iF,  psbM,  r,  * inv
 4170   Gx 12 12.3   +29  12 D  Com           13.  p eF,  vnr  4169,  4173-  5
 4171   Gx 12 12.3   +29  12 u  Com     5.1   14.  p eF,  vnr  4169,  4173-  5
 4173   Gx 12 12.3   +29  11 s  Com     4.8   13.  p F,  S,  2nd  of  4
 4174   Gx 12 12.4   +29  08 s  Com     0.8   14.  p F,  S,  3rd  of  4
I3037   Gx 12 12.4   +09  59 z  Vir           15.  p R,  PN ?,  mag  16
 4175   Gx 12 12.5   +29  09 s  Com     2.0   14.  p F,  eS,  4th  of  4
I 769   Gx 12 12.5   +12  07 s  Vir     2.5   13.  p vF,  pS,  vlbM
I3039   Gx 12 12.5   +12  18 m  Vir     1.0   15.  p S,  R,  bM
I3038   Gx 12 12.6   +11  20 z  Vir           16.  p R,  bM,  PN ?,  mag  16
 4176   Gx 12 12.7   -09  08 r  Vir                 eF,  vS,  R,  slbM,  *10
I3040   Gx 12 12.7   +11  04 m  Vir     0.6   16.  p R,  PN ?,  mag  16
I3041       12 12.7   +12  44 d  Vir                 S,  E
 4177   Gx 12 12.8   -14  00 r  Crv           13.  p vF,  pL,  R,  vgbM
 4178   Gx 12 12.8   +10  52 s  Vir     5.0   11.4  vF,  vL,  E  45deg  +/-  , *7 f;  = IC  3042
I3042       12 12.8   +10  52 x  Vir                 pF,  cL;  = 4178
I3043       12 12.8   +10  00 d  Vir                 cS,  E  ns,  mag  15
I3044   Gx 12 12.8   +13  59 v  Com     2.1         F,  stell
 4179   Gx 12 12.9   +01  18 s  Vir     4.2   10.9  pB,  pS,  pmE  135deg  +/-  , bMN
I 770       12 13.0   -04  33 d  Vir                 vF,  vS,  R,  *13.5  n  1'
I3045    ? 12 13.0   +12  47 x  Vir                 pF,  cS,  Ns  =  10.5m
 4180   Gx 12 13.1   +07  02 s  Vir     1.8   13.  p pF,  S,  lE  0deg  +/-  , r
I3046   Gx 12 13.1   +12  55 u  Vir     1.2   15.  p vF,  pS,  spir
 4183   Gx 12 13.3   +43  42 s  CVn     5.0   13.  p vF,  cL,  mE  170deg  +/-
I3047       12 13.3   +12  58 d  Vir                 R,  bM,  mag  14.5
 4181   Gx 12 13.4   +50  46 r  CVn           14.  p eF,  S,  stellar
 4182    - 12 13.4   +04  03 r  Vir                 vS  (vS  Cl?)
 4185   Gx 12 13.4   +28  31 r  Com           13.  p cF,  L,  R,  gbM
 4187   Gx 12 13.4   +50  44 r  CVn           14.  p pB,  S,  lE
I3048   D* 12 13.4   +13  04 x  Vir                 F,  S;  *13?
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I3049   Gx 12 13.5   +14  29 u  Com     1.1   16.  p R, PN ?, mag 16
 4184    - 12 13.6   -62  42 r  Cru                 Cl, mC,  st eS
 4190   Gx 12 13.7   +36  38 s  CVn     1.7   13.  p cF,  pS,  R, vglbM,  r
I3050   Gx 12 13.7   +13  26 t  Com     2.0   13.  p pB,  cL,  gbM;  = 4189
 4189   Gx 12 13.8   +13  26 s  Com     2.5   11.7   F,  L,  lE,  vglbM,  r;  = IC  3050
 4192   Gx 12 13.8   +14  54 s  Com     9.5   10.1   B,  vL,  vmE  152deg  ,  vsvmbM;  = M98
 4191   Gx 12 13.9   +07  12 r  Vir             14.  p cF,  R,  bM,  near  S*
 4193   Gx 12 13.9   +13  10 s  Vir     2.3   12.4   vF,  pL,  E,  vgbM;  = IC  3051
I3051      12 13.9   +13  10 x  Vir                 pB,  pS;  = 4193
I3052      12 13.9   +12  40 d  Vir                 R,  PN ?,  mag  16.5
I3053      12 14.0   +14  12 d  Com                 R,  bM,  PN ?,  mag  16
 4186   Gx 12 14.1   +14  44 s  Com     1.4   14.  p pF,  S,  R,  sp  M98
 4188   Gx 12 14.2   -12  33 r  Crv             14.  p eF,  pS
 4194   Gx 12 14.2   +54  32 s  UMa     2.5   12.4   pB,  vS,  vsbM  *12
 4195   Gx 12 14.2   +59  37 r  UMa             15.  p eF
 4198   Gx 12 14.3   +56  01 r  UMa             14.  p pF,  pS,  lE,  gbM
I3054      12 14.3   +13  31 d  Com                 R,  PN ?,  mag  16.5
 4196   Gx 12 14.4   +28  25 s  Com     1.6   14.  p pB,  S,  R,  vsmbM  *
I3055      12 14.4   +12  04 d  Vir                 bM,  mag  15
 4197   Gx 12 14.6   +05  48 s  Vir     3.5   13.  p pF,  pmE,  vgbM
I3056    ? 12 14.6   +13  47 x  Com                 pL,  vmE  50deg
 4201   Gx 12 14.7   -11  34 r  Vir             14.  p eF,  eS,  R,  bMN
 4199   Gx 12 14.8   +59  54 r  UMa             15.  p vF,  S
 4200   Gx 12 14.8   +12  11 r  Vir             14.  p cF,  lE,  lbM
 4205   Gx 12 14.9   +63  48 r  Dra             14.  p pB,  pS,  R,  *12  f,  ln
I3058      12 14.9   +14  04 d  Com                 R,  PN ?,  mag  16
I3059   Gx 12 14.9   +13  28 v  Com     1.7           vF,  spir,  doubtful
I3057      12 15.0   -44  29 d  Cen                 cF,  S,  R  (defect?)
I3060   Gx 12 15.0   +12  31 m  Vir     0.3   15.  p vF,  S,  lE  0deg  ;  *14?
 4203   Gx 12 15.1   +33  12 s  Com     3.6   10.7   vB,  S,  R,  psmbM
I3061   Gx 12 15.1   +14  02 s  Com     2.3   13.6   F,  pL,  spir
I3062   Gx 12 15.1   +13  35 m  Com     1.0   15.  p F,  S
I3063   Gx 12 15.1   +12  00 u  Vir     1.0   15.  p bM,  mag  14.5
 4204   Gx 12 15.2   +20  39 s  Com     4.2   13.  p vF,  cL,  iR,  vgbM
I 771   Gx 12 15.2   +13  11 z  Vir             15.  p vF,  S,  R,  *  3'  south
I 772   Gx 12 15.2   +23  57 z  Com             15.  p vF,  vS,  stell
I3064   Gx 12 15.2   +13  01 t  Vir     5.3   13.  p cF,  cL,  E  5deg  ;  =  4206
I3065   Nb 12 15.2   +14  26 x  Com     0.5           R,  PN ?,  mag  14
I3067   Gx 12 15.2   +23  57 z  Com             15.  p vF,  vS,  stell
 4206   Gx 12 15.3   +13  02 s  Vir     5.2   12.1   F,  vmE
 4210   Gx 12 15.3   +65  59 s  Dra     2.2   13.  p pF,  pS,  R,  vgbM
I3066   Gx 12 15.3   +13  28 u  Com     1.0   15.  p pL,  E  160deg  ,  spir
 4208      12 15.4   +13  54 D  Com                 nonexistent
I3068      12 15.4   +11  30 d  Vir                 bM,  mag  16
I3069      12 15.4   +10  10 d  Vir                 bM,  mag  15.5
I3070   * 12 15.4   +13  02 x  Vir                 vF,  vS
 4207   Gx 12 15.5   +09  35 s  Vir     1.8   13.  p pF,  pS,  lE,  *14  np
 4209    - 12 15.5   +28  31 r  Com                 F,  pS
I3071    ? 12 15.5   +09  33 x  Vir                 eF,  eS
 4211   Gx 12 15.6   +28  11 s  Com     1.4   14.  p vF,  eS,  mbM
 4214   Gx 12 15.6   +36  20 s  CVn     7.9    9.7   cB,  cL,  iE,  biN
I3072    ? 12 15.6   +09  33 x  Vir                 eF,  eS,  ?
I3073   Gx 12 15.6   +13  36 u  Com     1.0   16.  p bM,  mag  16
 4212   Gx 12 15.7   +13  54 s  Com     3.0   11.2   B,  L,  E  107deg  ,  g,  sbM,  r
 4213   Gx 12 15.7   +23  59 r  Com             14.  p cF,  vS,  R
I3074   Gx 12 15.7   +10  41 s  Vir     2.3   14.  p cF,  pL,  E  170deg
 4217   Gx 12 15.8   +47  06 s  CVn     5.5   12.  p pF,  L,  mE  45deg  ,  **   n,  p  of  2
 4218   Gx 12 15.8   +48  08 s  CVn     1.2   13.  p vF,  vS
I3075   Gx 12 15.8   +23  35 m  Com     0.7   15.  p F,  vS,  R,  stell
 4215   Gx 12 15.9   +06  24 s  Vir     1.9   13.  p B,  pS,  E,  sbM  *11
 4216   Gx 12 15.9   +13  09 s  Vir     8.3   10.0   vB,  vL,  vmE  17deg  ,  sbMN
 4221   Gx 12 16.0   +66  14 s  Dra     2.3   14.  p pB,  S,  R,  psbM
I3076    ? 12 16.1   +09  05 x  Vir                 vF,  vS
I3077   Nb 12 16.1   +14  24 x  Com     0.2           bM,  mag  15
I3078      12 16.1   +12  39 d  Vir                 bM,  mag  14
I3079   Gx 12 16.1   +11  31 z  Vir             15.  p bM,  mag  14
 4220   Gx 12 16.2   +47  53 s  CVn     4.1   12.  p cB,  pL,  pmE  134deg  ,  psbM
I3080   Nb 12 16.2   +14  13 x  Com     0.3           bM,  mag  14
I3081      12 16.2   +12  40 d  Vir                 bM,  mag  15
I3082      12 16.2   +23  51 d  Com                 vF,  vS,  dif,  *5  n  6'
I3084   Gx 12 16.3   +23  54 m  Com     0.4   16.  p F,  vS,  R,  dif
 4219   Gx 12 16.4   -43  20 s  Cen     4.5   12.  p pF,  pL,  pmE,  vglbM
 4222   Gx 12 16.4   +13  19 s  Com     3.3   14.  p vF,  pS,  R
 4226   Gx 12 16.4   +47  02 s  CVn     1.3   14.  p F,  S,  lE,  f  of  2
I3083    ? 12 16.4   +12  35 x  Vir                 bM,  mag  15
I3085   * 12 16.4   +09  28 x  Vir                 cF,  vS,   = *13
I3089   Gx 12 16.4   +23  49 m  Com     0.4   16.  p vF,  S,  vlbM,  dif
 4223    - 12 16.5   +06  42 r  Vir                 pF,  pL,  R,  r;  =  4241?
 4227   Gx 12 16.5   +33  31 s  CVn     1.8   14.  p F,  vS,  vlE,  psbM,  sp  of  2
I3086    ? 12 16.5   +09  01 x  Vir                 eF,  vS
I3087   D* 12 16.5   +13  17 x  Vir                 F,  S,  eE  30deg  ,  neb?
I3088   * 12 16.5   +09  28 x  Vir                 vF,  vS,   = *14
I3090   D* 12 16.5   +09  26 x  Vir                 vF,  vS
 4224   Gx 12 16.6   +07  28 s  Vir     2.4   11.8   pB,  pS,  lE,  gbM,  r
 4228    - 12 16.6   +36  20 r  CVn                 vF,  L,  R,  gbM;  =  4214?
I3091   D* 12 16.6   +13  59 x  Com                 bM,  mag  14
I3092      12 16.6   +10  03 d  Vir                 bM,  mag  15.5
 4225   Gx 12 16.7   -12  18 r  Crv             14.  p F,  eS,  R,  *  170deg  ,  60"
 4229   Gx 12 16.7   +33  34 r  CVn             14.  p cF,  vS,  lE,  psbM,  nf  of  2
 4236   Gx 12 16.7   +69  28 s  Dra    18.6    9.7   vF,  eL,  mE  160deg  +/-  ,  vgbM
I3093   Nb 12 16.7   +14  17 x  Com                 bM,  mag  14
 4231   Gx 12 16.8   +47  27 s  CVn     1.4   15.  p vF,  vS,  n  of  Dneb
 4232   Gx 12 16.8   +47  26 s  CVn     1.5   15.  p vF,  vS,  s  of  Dneb
 4238   Gx 12 16.9   +63  25 s  Dra     1.9   14.  p vF,  pS,  iR,  vglbM
I3094   Gx 12 16.9   +13  37 u  Com     0.6   14.  p F,  S,  bM
I3095   Gx 12 16.9   +23  56 m  Com     0.5   16.  p pF,  S,  vlE  pf,  bM,  *5  p  35s  ,  1'  s
I3096   Nb 12 16.9   +14  31 x  Com     1.            bM,  mag  14.5
I3097   Gx 12 17.0   +09  24 z  Vir             15.  p vF,  S,  lbM
 4233   Gx 12 17.1   +07  37 s  Vir     2.3   11.9   pF,  R,  vsbMSN
I3099   Gx 12 17.1   +12  27 u  Vir     2.1   15.  p vF,  pL,  lE  0deg
 4234   Gx 12 17.2   +03  41 s  Vir     1.3   12.9   pB,  L,  R,  gbM
 4235   Gx 12 17.2   +07  11 s  Vir     4.3   11.6   pB,  pL,  pmE,  bM,  p  of  2
 4237   Gx 12 17.2   +15  19 s  Com     2.3   11.7   pB,  pL,  lE,  vgbM,  r
I3098      12 17.2   +07  12 x  Vir                 pF,  pS,  E  45deg  ;  =  4235
I3100      12 17.2   +12  15 d  Vir                 bM,  wisps  45deg  ?,  mag  14.5
 4230   OC 12 17.3   -55  08 s  Cen     6.     9.  p Cl,  F,  pL,  iF,  st  13...15
 4239   Gx 12 17.3   +16  32 r  Com             13.  p F,  pL,  R
I3101   Gx 12 17.3   +11  56 z  Vir             15.  p bM,  mag  15
 4240   Gx 12 17.4   -09  56 r  Vir             14.  p pB,  S,  *12  sp  0'.5
 4241   Gx 12 17.4   +06  41 s  Vir     2.5   12.0   vF,  L,  vgbM,  *7  s;  =  IC  3102
 4250   Gx 12 17.4   +70  48 s  Dra     2.7   13.  p pB,  S,  R,  pgbM
I3102      12 17.4   +06  41 x  Vir                 pF,  pS,  *?;  =  4241
 4242   Gx 12 17.5   +45  37 s  CVn     4.8   11.0   vF,  cL,  iR,  vgbM,  r
 4244   Gx 12 17.5   +37  49 s  CVn    16.2   10.2   pB,  vL,  eE  43deg  ,  vgbM
I3103   * 12 17.5   +09  22 x  Vir                 vF,  vS,  stell
 4243    - 12 17.6   -11  19 r  Vir                 pB,  eS,  pB*  close  p
 4245   Gx 12 17.6   +29  36 s  Com     3.3   11.4   cB,  pL,  vlE,  smbM,  r
I3105   Gx 12 17.6   +12  23 u  Vir     1.8   15.  p vF,  pS,  E  40deg
I3110      12 17.7   +37  23 d  CVn                 vF,  S,  dif
 4248   Gx 12 17.8   +47  25 s  CVn     3.0   12.6   vF,  S,  pmE,  psbM
I3106      12 17.8   +09  37 d  Vir                 vF,  vS,  E  95deg
I3107   Gx 12 17.8   +10  50 u  Vir     1.5   14.  p F,  vS,  lE,  mbM
I3108      12 17.8   +13  21 d  Com                 R,  bM,  mag  14
I3109      12 17.8   +13  08 d  Vir                 bM,  mag  14
I3111   Gx 12 17.8   +08  26 z  Vir             15.  p eF,  S?
I3112   Gx 12 17.8   +26  01 v  Com     1.3           F,  S,  iF,  N
I3114    ? 12 17.9   +09  08 x  Vir                 cF,  vS,  stell
 4246   Gx 12 18.0   +07  11 s  Vir     2.5   12.7   eF
 4247   Gx 12 18.0   +07  16 s  Vir     0.7   15.  p F,  S,  R,  bM,  6'  n  of  4246
 4249   Gx 12 18.0   +05  36 r  Vir             15.  p F
I3113      12 18.0   +07  11 x  Vir                 cF,  pL,  E;  =  4246

I3115   Gx 12 18.0   +06  39 s  Vir     1.7   13.1   vF,  pL,  E
I3116      12 18.0   +25  05 d  Com                 vF,  cS,  R,  bM
 4251   Gx 12 18.1   +28  10 s  Com     4.2   12.  p vB,  S,  E,  vsvmbMN,  *6-7  f  90s
I 773   Gx 12 18.1   +06  08 v  Vir     1.8           F,  vS,  dif,  2  vF  st  inv
I3117    ? 12 18.1   +09  04 x  Vir                 eF,  S,  E  30deg
I3119   Gx 12 18.1   +24  41 z  Com             15.  p pF,  cS,  R,  bM
 4202   Gx 12 18.2   -01  04 F  Vir             14.  p F,  irr,  cometary,  F*  1'  nf
I3118   Gx 12 18.2   +09  30 u  Vir     1.6   15.  p vF,  cS,  lE,  dif
I3122   Gx 12 18.3   +25  13 u  Com     1.5   15.  p pF,  pL,  E  150deg  ,  pLN
 4253   Gx 12 18.4   +29  49 s  Com     1.1   14.  p vF,  vS,  R
I3120      12 18.4   +13  42 d  Com                 R,  bM,  mag  14.5
I3121      12 18.4   +13  14 d  Vir                 eF,  lE,  mag  15
I3123   * 12 18.4   +08  04 x  Vir                 neb,  or  *
I3125      12 18.4   +24  22 d  Com                 F,  S,  R,  bM
 4252   Gx 12 18.5   +05  34 s  Vir     1.5   15.  p F,  E
I3124   * 12 18.5   +09  35 x  Vir                 cF,  S,   = *13
I3127   Gx 12 18.5   +11  51 m  Vir     0.6   16.  p R,  bM,  mag  16
I3126      12 18.6   +13  48 d  Com                 R,  bM,  mag  15
 4256   Gx 12 18.7   +65  54 s  Dra     4.6   12.  p pB,  L,  cE  38deg  ,  bMBN
I3128      12 18.7   +11  43 d  Vir                 lE,  D?,  mag  14.5
I3129   * 12 18.7   +09  36 x  Vir                 vF,  eS,   = *14
 4254   Gx 12 18.8   +14  25 s  Com     5.4    9.8   !!  B,  L,  R,  gbM,  r,  3-branched  spiral;  =
  M99
I 774      12 18.8   -06  46 d  Vir                 F,  vS,  R,  gbM
I3104   Gx 12 18.8   -79  44 c  Cha     4.7           eeF,  cS,  or  vS  Cl,  *12  sp  0'.5
I3130    ? 12 18.8   +08  14 x  Vir                 eF,  pS,  mE  140deg  ,  ?
I3131   Gx 12 18.8   +07  51 m  Vir     0.6   15.  p vF,  S
I3132      12 18.8   +07  52 x  Vir                 vF,  S,  stell;  =  IC  3131
I 775   Gx 12 18.9   +12  55 s  Vir     1.4   13.3   vF,  S,  stell,  N
I3133    ? 12 18.9   +07  39 x  Vir                 eF,  S,  dif
I3134   Gx 12 18.9   +08  58 z  Vir             15.  p vF,  vS,  E  0deg
I3135      12 18.9   +27  30 d  Com                 vF,  S,  iF
I3141   Gx 12 18.9   +24  11 z  Com             16.  p F,  S,  R,  bM
 4255   Gx 12 19.0   +04  48 r  Vir             13.  p S,  pmbM
 4258   Gx 12 19.0   +47  18 s  CVn    18.2    8.3   vB,  vL,  vmE  0deg  ,  sbMBN;  =  M106
I 776   Gx 12 19.0   +08  51 s  Vir     2.1   14.  p F,  pL,  R
I3136   Gx 12 19.0   +06  11 v  Vir     1.2           F
I3137      12 19.0   +12  27 d  Vir                 pL,  E  45deg
I3138      12 19.0   +12  25 d  Vir                 R,  bM,  mag  15.5
I3139   * 12 19.0   +09  08 x  Vir                 eF,  vS
I3140      12 19.0   +27  08 d  Com                 vF,  pS,  iF,  dif
 4257   Gx 12 19.1   +05  44 s  Vir     1.2   15.  p vF,  pS,  R,  *18  s  2'
I3142   Nb 12 19.1   +13  59 x  Com                 R,  bM,  mag  14.5
I3143   Gx 12 19.1   +27  18 z  Com             16.  p vF,  S,  R
I3144      12 19.2   +25  18 d  Com                 vF,  S,  R,  bM
I3145      12 19.2   +24  18 d  Com                 F,  S,  R,  bM
I3146      12 19.2   +25  43 d  Com                 eF,  S,  iF
I3147      12 19.3   +12  01 d  Vir                 vF,  vS,  stell
I3148   Gx 12 19.3   +07  52 m  Vir     0.8   15.  p vF,  S
I3149   Gx 12 19.3   +12  18 m  Vir     0.5   16.  p vF,  vS
 4259   Gx 12 19.4   +05  23 s  Vir     1.1   13.6   F,  pS,  R
 4260   Gx 12 19.4   +06  06 s  Vir     2.6   11.8   pB,  E,  psbM
 4261   Gx 12 19.4   +05  49 s  Vir     3.9   10.3   pB,  pS,  R,  gbM
I 777   Gx 12 19.4   +28  18 u  Com     1.3   14.  p vF
I 778      12 19.4   +56  00 d  UMa                 eF,  pS,  r,  bet  2  st
 4262   Gx 12 19.5   +14  53 s  Com     2.2   11.5   B,  S,  R,  r
I3150    ? 12 19.5   +07  48 x  Vir                 vF,  S
I3151      12 19.5   +09  24 d  Vir                 R,  bM,  mag  13.5
 4264   Gx 12 19.6   +05  51 s  Vir     1.1   12.9   F,  pS,  R,  gbM
 4271   Gx 12 19.6   +56  45 r  UMa             13.  p pB,  pL,  iF
I3152   Gx 12 19.6   -26  09 c  Hya     2.0           pB,  S,  R,  4  st  sf,  *8  np
I3153   Gx 12 19.6   +05  23 z  Vir             15.  p vF,  S,  4273  f
I3154      12 19.6   +25  35 d  Com                 F,  S,  R,  bM
 4263   Gx 12 19.7   -12  15 D  Crv             14.  p vF,  pL,  iF;  =  4265
 4265   Gx 12 19.7   -12  15 D  Crv             14.  p vF,  pS,  R
 4266   Gx 12 19.7   +05  32 s  Vir     2.1   15.  p pF
I3156   Gx 12 19.7   +09  09 m  Vir     0.6   15.  p vF,  vS
I3157   Gx 12 19.7   +12  25 z  Vir             15.  p R,  bM,  mag  14
 4267   Gx 12 19.8   +12  48 s  Vir     3.5   10.9   pB,  vS,  R,  vsmbM
 4268   Gx 12 19.8   +05  17 s  Vir     1.6   12.7   pF,  S,  2nd  of  6  neb
 4269   Gx 12 19.8   +06  01 s  Vir     1.5   14.  p pF,  S,  R,  *9  f  1s  .7,  n  85"
 4270   Gx 12 19.8   +05  28 s  Vir     2.2   12.2   pB,  S,  R
 4272   Gx 12 19.8   +30  20 z  Com             14.  p cF,  S,  iR,  gmbM
 4274   Gx 12 19.8   +29  37 s  Com     6.9   10.4   vB,  vL,  E  90deg  ,  mbMN
I 779      12 19.8   +29  53 d  Com                 F
I3155   Gx 12 19.8   +06  00 v  Vir     1.1           cF,  S,  sbM;  vF  st  inv?
I3158   * 12 19.8   +09  18 x  Vir                 eF,  cS,  ??
 4273   Gx 12 19.9   +05  21 s  Vir     2.3   11.9   pB,  L,  E,  gbM
 4275   Gx 12 19.9   +27  37 s  Com     1.0   13.  p F,  S,  vlE,  gbM,  *15  nr
I 780   Gx 12 19.9   +25  46 u  Com     1.3   14.  p pB,  S,  R,  N  =  12.5m
I3159      12 19.9   +11  39 d  Vir                 R,  mbM,  mag  15
I3166      12 19.9   +60  42 d  UMa                 eeF,  S,  p  of  2
I3160   * 12 20.0   +09  06 x  Vir                 eF,  cS
I3161   D* 12 20.0   +09  00 x  Vir                 eF,  vS,  *?,  conn  w  f  one
I3162   D* 12 20.0   +09  00 x  Vir                 eF,  vS,  *?,  conn  w  p  one
I3163   D* 12 20.0   +09  15 x  Vir                 neb  or  *?
I3165   Gx 12 20.0   +27  58 u  Com     2.0   15.  p F,  cS,  iF,  lbM
 4277   Gx 12 20.1   +05  21 s  Vir     0.9   13.5   vF,  eS
 4278   Gx 12 20.1   +29  17 s  Com     3.6   10.2   vB,  pL,  R,  mbM,  r,  1st  of  3
I 781   Nb 12 20.1   +14  58 x  Com     1.            vF,  S,  dif
I3164      12 20.1   +24  57 d  Com                 eF,  S,  iF;  D*?
 4276   Gx 12 20.2   +07  42 r  Vir             14.  p pF,  pL
 4284   Gx 12 20.2   +58  06 r  UMa             14.  p cF,  lE,  p  of  2
I3167   Gx 12 20.2   +09  32 z  Vir             15.  p vF,  vS,  lE  65deg  ,  bM
 4283   Gx 12 20.3   +29  19 s  Com     1.4   12.0   B,  S,  R,  bM,  2nd  of  3
 4291   Gx 12 20.3   +75  22 s  Dra     2.2   12.  p pB,  vS,  R,  lbM,  3  st  f
I3168   Gx 12 20.3   +27  55 z  Com             16.  p F,  cS,  E  45deg  ,  bM
I3171   Gx 12 20.3   +25  32 m  Com     0.3   15.  p pB,  S,  R,  bM
 4279   Gx 12 20.4   -11  40 r  Vir             14.  p eeF,  vS,  R
 4280    - 12 20.4   -11  41 r  Vir                 eF,  vS,  R
 4281   Gx 12 20.4   +05  23 s  Vir     3.1   11.3   B,  vL,  R,  pgbM
 4282   Gx 12 20.4   +05  35 r  Vir             14.  p pF
I3169      12 20.4   +26  36 d  Com                 vF,  vS,  R,  bM
I3170   Gx 12 20.4   +09  25 m  Vir     0.4   15.  p F,  S,  R,  bM
I3172      12 20.4   +27  49 d  Com                 vF,  S,  iF
I3174   Gx 12 20.4   +10  14 z  Vir             16.  p eF,  vS,  *13  att  sp
I3175   Gx 12 20.4   +09  50 z  Vir             15.  p R,  bM,  mag  13
I3180      12 20.4   +60  42 d  UMa                 vF,  pL,  R,  *7.5  s,  f  of  2
I3173   Gx 12 20.5   +11  20 z  Vir             16.  p R,  bM,  mag  13
I3176      12 20.5   +25  31 d  Com                 vF,  vS,  R,  bM
 4288   Gx 12 20.6   +46  17 s  CVn     2.3   13.  p vF,  pS,  R,  vgbM,  r
I3177      12 20.6   +14  07 d  Com                 L,  vmE  45deg  ,  2'.5  l
I3178      12 20.6   +26  10 d  Com                 F,  vS,  iF,  N
I3179      12 20.6   +26  10 d  Com                 F,  vS,  iF,  N
 4285   Gx 12 20.7   -11  39 r  Vir             14.  p eeF,  pS,  R
 4286   Gx 12 20.7   +29  21 s  Com     1.9   15.  p vF,  3rd  of  3;  =  IC  3181
I3181      12 20.7   +29  21 x  Com                 pF,  pL,  lE  150deg  ;  =  4286
I3184   Gx 12 20.7   +24  55 z  Com             16.  p pF,  cS,  E  40deg  ,  bM
 4287   Gx 12 20.8   +05  39 r  Vir             15.  p pF
 4290   Gx 12 20.8   +58  06 s  UMa     2.5   12.  p pB,  L,  R,  gmbM
I3182  *** 12 20.8   +12  44 x  Vir                 vF,  S,  biN
I3183   * 12 20.8   +06  41 x  Vir                 vF,  cS,  st?
I3185      12 20.9   +25  26 d  Com                 F,  vS,  R,  bM
I3186   Gx 12 20.9   +24  40 m  Com     0.4   15.  p pB,  S,  R,  bM
I3187   Gx 12 20.9   +11  10 z  Vir             16.  p vlE,  bM,  mag  14.5
I3188   Gx 12 20.9   +11  01 m  Vir     0.4   15.  p R,  bM,  mag  13.5
I3189      12 20.9   +25  26 d  Com                 F,  vS,  R,  bM
I3193   Gx 12 20.9   +27  54 m  Com     0.8   16.  p F,  S,  iF;  D*?
 4289   Gx 12 21.0   +03  43 s  Vir     3.9   14.  p vF,  S,  *8.5  12s   f
I3190   * 12 21.0   +09  34 x  Vir                 eF,  eS
I3191    ? 12 21.1   +07  42 x  Vir                 vF,  vS,  R
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I3192      12 21.1   +11  44  d  Vir                 lbM,  PN  ?, mag  15
 4293   Gx 12 21.2   +18  23  s  Com    6.0   11.  p F, vL,  E,  lbM,  r
 4295   Gx 12 21.2   +28  09  v  Com                 vF,  S
I3194      12 21.2   +25  08  d  Com                 F,  vS,  R,  bM
 4292   Gx 12 21.3   +04  36  s  Vir    2.1   14.  p F,  S,  R,  vglbM,  *9 np  72"
 4294   Gx 12 21.3   +11  31  s  Vir    3.1   12.1   F,  L,  mE  135deg  +/- , biN,  p of  2
I3195      12 21.3   +25  48  d  Com                 vF,  S,  iF
I3197      12 21.4   +25  27  d  Com                 F,  vS,  R,  bM
 4296   Gx 12 21.5   +06  40  r  Vir          14.  p vF,  vS
 4297   Gx 12 21.5   +06  40  r  Vir          14.  p eF,  eS
 4298   Gx 12 21.5   +14  36  s  Com    3.2   11.4   F,  L,  E,  vgbM,  p of  2
I3196      12 21.5   +11  44  d  Vir                 bM,  mag  14
I3198      12 21.5   +26  22  d  Com                 eF,  S,  iF
 4301   Gx 12 21.6   +04  47  s  Vir    1.4   15.  p F,  E,  10'  nf  4292
I 782   Gx 12 21.6   +05  45  m  Vir    0.6   15.  p eF,  S,  R
I 783   Gx 12 21.6   +15  45  s  Com    1.5   13.6   eF,  S,  R
I3200      12 21.6   +26  46  d  Com                 vF,  S,  iF,  N
 4299   Gx 12 21.7   +11  30  s  Vir    1.7   12.5   F,  L,  lE,  vgbM,  f of  2
 4300   Gx 12 21.7   +05  23  r  Vir          14.  p F,  lE,  vgbM
 4302   Gx 12 21.7   +14  36  s  Com    5.2   11.6   L,  vmE  177deg  , f of  2
 4319   Gx 12 21.7   +75  19  s  Dra    3.1   12.  p pB,  pS,  vlE,  sbM
I3199   Gx 12 21.7   +10  36  u  Vir    1.1   15.  p R,  bM,  mag  14
I3201      12 21.7   +25  43  d  Com                 vF,  S,  R,  bM
I3202      12 21.7   +27  03  d  Com                 eF,  S,  iF
I3203   Gx 12 21.7   +25  53  u  Com    1.5   16.  p pF,  S,  E  150deg
I3204      12 21.8   +24  15  d  Com                 F,  S,  E
I3205      12 21.8   +26  20  d  Com                 cF,  S,  iF,  N
I3206      12 21.8   +26  22  d  Com                 cF,  S,  iF,  N
 4303   Gx 12 21.9   +04  28  s  Vir    6.0    9.7  vB,  vL,  vsbM*,  biN;  = M61
 4308   Gx 12 21.9   +30  03  s  Com    1.0   14.  p vF,  S,  vF  st  inv,  np  4314
I3207      12 21.9   +24  21  d  Com                 F,  S,  E  100deg
I3208      12 22.0   +11  57  d  Vir                 F,  pL,  vmE  70deg
I3210   Gx 12 22.0   +28  26  z  Com          15.  p F,  S,  R,  bM,  spir
 4305   Gx 12 22.1   +12  44  s  Vir    2.2   12.6   vF,  R
 4306   Gx 12 22.1   +12  47  s  Vir    1.6   14.  p vF,  pL,  R,  4305  sp
 4307   Gx 12 22.1   +09  02  s  Vir    3.7   13.  p pF,  L,  mE,  3 knots
I3209   Gx 12 22.1   +11  45  z  Vir          15.  p pL,  E  140deg  , sbM  *,  spir
I3211   Gx 12 22.1   +08  59  u  Vir    1.1   15.  p eF,  S
I3212   Gx 12 22.1   +28  11  z  Com          16.  p F,  S,  R,  glbM
I3213   Gx 12 22.1   +23  52  z  Com          16.  p pF,  S,  R,  bM,  *12  att  np
I3215   Gx 12 22.1   +26  03  u  Com    2.0   16.  p vF,  pS,  E  95deg  , bM
 4304   Gx 12 22.2   -33  29  s  Hya    2.4   12.0   vF,  vL,  R,  vgvlbM,  r
 4309   Gx 12 22.2   +07  09  s  Vir    2.0   14.  p F,  S,  *11  f  12s
I3214      12 22.2   +27  14  d  Com                 vF,  vS,  R,  bM
I3216      12 22.2   +25  17  d  Com                 F,  vS,  R,  bM
I3217      12 22.2   +26  23  d  Com                 cF,  S,  R,  bM,  spir
I3218   Gx 12 22.2   +06  55  m  Vir    0.6   16.  p vF,  pL,  biN?
I3219      12 22.3   +25  57  d  Com                 eF,  vS,  R,  bM,  spir
I3221      12 22.3   +25  17  d  Com                 eF,  S,  iF,  v  diffic
I3222   Gx 12 22.3   +28  50  u  Com    1.1   16.  p F,  cS,  dif
 4310   Gx 12 22.4   +29  12  s  Com    2.6   13.  p F,  cL,  lE,  n of  2
 4311   Gx 12 22.4   +29  12  u  Com    2.3   13.  p F,  s of  2
 4331   Gx 12 22.4   +76  11  s  Dra    2.0   15.  p eF,  E  0deg  +/-
I3220      12 22.4   +10  35  d  Vir                 R,  bM,  mag  14.5
 4312   Gx 12 22.5   +15  32  s  Com    4.7   11.8   pB,  cL,  E,  gbM
I3223    * 12 22.5   +09  29  x  Vir                 vF,  pS,  am  3 vF  st
 4313   Gx 12 22.6   +11  48  s  Vir    3.9   13.  p vF,  L,  E  135deg  +/- , r
 4314   Gx 12 22.6   +29  53  s  Com    4.8   10.5   cB,  L,  E  150deg  +/- , sbM,  * np
 4317    * 12 22.6   +31  03  r  Com                 F,  S
I 784      12 22.6   -04  39  D  Vir                 vF,  pL,  mE,  pB*  s
I3224      12 22.6   +12  09  d  Vir                 R,  bM,  mag  14.5
I3225      12 22.6   +06  41  d  Vir                 F,  S;  st?
I3226      12 22.6   +26  04  d  Com                 vF,  vS,  bM  *,  spir
I3227      12 22.6   +24  05  d  Com                 F,  S,  iF
 4315    - 12 22.7   +09  19  r  Vir                 vF,  vS
 4318   Gx 12 22.7   +08  12  s  Vir    0.9   14.  p eF,  *8  n  5'
 4345    * 12 22.7   +75  20  r  Dra                 F,  pL,  gbM
I3228      12 22.7   +24  20  d  Com                 F,  vS,  E  150deg  , bM
I3229      12 22.7   +06  41  d  Vir                 eF,  cS,  dif,  ?
I3230      12 22.7   +27  45  d  Com                 F,  vS,  iF
I3231      12 22.7   +24  49  d  Com                 pF,  S,  iF,  bM
 4316   Gx 12 22.8   +09  21  r  Vir          14.  p vF,  S,  mE,  2 knots
 4332   Gx 12 22.8   +65  51  s  Dra    2.3   13.  p pF,  S,  vlE,  vgbM
I3232      12 22.8   +24  26  d  Com                 F,  eS,  neb*
 4321   Gx 12 22.9   +15  49  s  Com    6.9    9.4   !!  pF,  vL,  R,  vg,  psbMrN,  2-br  spir;  = M100
 4323    - 12 22.9   +15  54  r  Com                 2nd  of  2,  vF,  n of  M100;  = 4322?
I3233      12 22.9   +12  34  d  Vir                 R,  bM,  mag  15
I3234      12 22.9   +28  07  d  Com                 F,  S,  R,  bM
 4322   Gx 12 23.0   +15  54  s  Com    1.3   13.9   1st  of  2,  vF,  n of  M100
 4335   Gx 12 23.0   +58  27  s  UMa    2.2   14.  p pB,  S,  E,  gbM
I 785   Gx 12 23.0   -13  14  m  Crv    0.8   15.  p F,  vS,  R,  stell
I3235      12 23.0   +13  32  d  Com                 lE,  bM,  mag  15
I3236      12 23.0   +10  05  d  Vir                 R,  bM,  mag  14
I3237      12 23.0   +28  30  d  Com                 F,  cS,  iF,  eFN,  att  *14  sp
 4320   Gx 12 23.1   +10  33  r  Vir          15.  p F,  vS,  sp of  2
 4324   Gx 12 23.1   +05  15  s  Vir    2.5   13.  p pB,  R or  lE,  bM
 4338   Gx 12 23.1   +28  55  r  Com          15.  p vF,  lE,  com;  = IC  3247
I3238   Gx 12 23.1   +14  25  m  Com    0.6   15.  p R,  bM,  14m
I3239   Gx 12 23.1   +11  43  z  Vir          16.  p E,  lbM,  mag  15
I3241      12 23.1   +26  54  d  Com                 F,  vS,  R,  bM
 4325   Gx 12 23.2   +10  38  r  Vir          15.  p vF,  vS,  iR,  nf of  2
 4326   Gx 12 23.2   +06  04  s  Vir    1.7   14.  p vF,  S,  R,  bM,  1st  of  3
 4327    - 12 23.2   +15  47  r  Com                 vF,  s of  4328
I 786   Gx 12 23.2   -13  13  m  Crv    1.0   15.  p vF,  eS,  R,  stell
I3240      12 23.2   +10  20  d  Vir                 R,  bM,  mag  15
I3242      12 23.2   +26  15  d  Com                 vF,  S,  iF
I3243   Gx 12 23.2   +27  45  z  Com          16.  p F,  S,  iF,  dif
I3244   Gx 12 23.2   +14  23  v  Com    0.7         R,  bM,  mag  14
 4328   Gx 12 23.3   +15  48  s  Com    1.5   13.5   F,  S,  R,  r
 4330   Gx 12 23.3   +11  23  r  Vir          14.  p vF,  L,  mE
I3245    ? 12 23.3   +09  07  x  Vir                 vF,  pL,  bM;  defect?
I3246      12 23.3   +13  03  d  Vir                 eF,  pL,  vmE  145deg  , ?
I3247   Gx 12 23.3   +28  53  u  Com    2.4   16.  p pF,  pS,  E  170deg  , bM
I3248      12 23.3   +25  33  d  Com                 eeF,  S,  R,  bM
I3249      12 23.3   +25  27  d  Com                 eeF,  S,  iF
I3250      12 23.3   +25  38  d  Com                 eeF,  S,  R,  bM
I3251      12 23.3   +25  39  d  Com                 eeF,  S,  R,  bM
 4329   Gx 12 23.4   -12  34  s  Crv    1.2   14.  p vF,  vS,  R,  bMN
 4333   Gx 12 23.4   +06  02  s  Vir    1.1   14.  p F,  pS,  R,  bM,  2nd  of  3
 4334   Gx 12 23.4   +07  28  s  Vir    2.4   14.  p pF,  S,  R,  * vnr
I3252   OC 12 23.4   +28  37  x  Com                 F,  S,  iF;  Cl?
 4346   Gx 12 23.5   +47  00  s  CVn    3.5   12.  p vF,  S,  mE  100deg  +/- , vsmbMBN
 4363   Gx 12 23.5   +74  57  s  Dra    1.5   15.  p eF,  pL,  iF
I3254      12 23.5   +19  27  x  Com                 B,  S,  R,  PN  ;  = 4336
 4336   Gx 12 23.6   +19  27  r  Com          13.  p vF,  pL,  iR,  biN?
 4339   Gx 12 23.6   +06  05  s  Vir    2.3   11.4   B,  pL,  R,  bM,  3rd  of  3
 4340   Gx 12 23.6   +16  43  s  Com    4.1   11.0   pB,  S,  R,  psbM
 4342   Gx 12 23.6   +07  03  t  Vir    1.1   14.  p eF,  vS,  R;  = IC  3256
 4344   Gx 12 23.6   +17  32  s  Com    1.9   13.  p vF,  pS,  R,  vglbM,  triangle  2 st
I3255   Gx 12 23.6   +09  37  z  Vir          15.  p R,  bM,  mag  13
 4343   Gx 12 23.7   +06  57  s  Vir    2.8   12.1   pF,  S,  E;  D?
I3253   Gx 12 23.7   -34  38  s  Cen    3.3   12.  p eF,  vL,  mE  20deg  , lbM
I3256   Gx 12 23.7   +07  03  s  Vir    1.4   12.6   *12  in  S neb  (= 4341  or  42?)
I3257    ? 12 23.7   +07  16  x  Vir                 eF
I3258   Gx 12 23.7   +12  28  s  Vir    1.9   14.  p cF,  cS,  R,  exc  N s
I3259   Gx 12 23.8   +07  11  s  Vir    1.8   13.6   F,  cS,  R,  bM
I3262   OC 12 23.8   +27  24  x  Com                 F,  S,  iF,  Cl?
I3263   Gx 12 23.8   +28  12  m  Com    0.6   15.  p pF,  S,  R,  bM,  spir,  2nd  sp  att
 4337   OC 12 23.9   -58  08  s  Cru    4.     8.9   Cl,  pRi,  lC,  st  12...14
 4347    - 12 23.9   -03  14  r  Vir                 no  description
 4348   Gx 12 23.9   -03  27  s  Vir    3.5   13.  p F,  pL,  E  70deg  +/- , vlbM
I3260   Gx 12 23.9   +07  07  s  Vir    1.9   13.3   F,  cS,  R,  bM
I3261      12 23.9   +11  28  d  Vir                 pS,  F*  M,  spir,  doubtful
I3264      12 23.9   +25  34  d  Com                 vF,  S,  R,  bM
 4341   Gx 12 24.0   +07  07  r  Vir          14.  p eF,  vS,  R;  = IC  3260
 4350   Gx 12 24.0   +16  42  s  Com    3.2   11.1   cB,  vS,  mE,  vsbM
 4351   Gx 12 24.0   +12  12  s  Vir    2.0   12.7   F,  pL,  iR,  bM
 4353   Gx 12 24.0   +07  47  s  Vir    1.3   14.  p no  description;  = IC  3266
 4357   Gx 12 24.0   +48  46  s  CVn    3.8   14.  p F,  pS,  gbM;  = 4381?
 4358   Gx 12 24.0   +58  24  r  UMa          14.  p cF,  cS,  lE
 4364   Gx 12 24.0   +58  24  r  UMa          14.  p cF,  cS,  R
I3265    ? 12 24.0   +07  48  x  Vir                 pF,  S,  N;  *?
I3266      12 24.0   +07  47  x  Vir                 cF,  S,  biN,  st?;  = 4353
 4352   Gx 12 24.1   +11  13  s  Vir    1.9   12.7   cF,  cS,  lE
 4354    - 12 24.1   +12  12  r  Vir                 eeF,  pL,  v  diffic;  = 4351?
I3267   Gx 12 24.1   +07  03  s  Vir    1.1   13.5   pF,  cS,  R
I3268   Gx 12 24.1   +06  36  s  Vir    0.7   14.  p pB,  *?
I3269      12 24.1   +27  26  d  Com                 eF,  S,  iF
I3270      12 24.1   +27  35  d  Com                 vF,  vS,  iF
 4355    - 12 24.2   -01  00  r  Vir                 eF,  S,  R
 4359   Gx 12 24.2   +31  31  s  Com    3.5   13.  p cF,  pmE  90deg  , vlbM
 4362   Gx 12 24.2   +58  22  r  UMa          15.  p vF,  cS,  R,  r
I3271   Gx 12 24.2   +07  57  u  Vir    1.1   15.  p eF,  pS,  dif,  ??
I3272      12 24.2   +23  18  d  Com                 vF,  S,  iF,  *13  att  n
I3276      12 24.2   +25  49  d  Com                 vF,  vS,  R,  bM
 4356   Gx 12 24.3   +08  33  r  Vir          14.  p vF;  = IC  3273
 4360   Gx 12 24.3   +09  17  s  Vir    1.7   13.  p F,  F  st  inv,  *9.5  np
I3273      12 24.3   +08  32  x  Vir                 cF,  pL,  E  48deg  , *10.5  inv;  = 4356
I3274   Gx 12 24.3   +09  17  u  Vir    1.4   14.  p eF,  vS,  ?
I3275      12 24.3   +10  25  d  Vir                 R,  bM,  mag  14.5
I3277      12 24.3   +25  34  d  Com                 eF,  cS,  dif
I3278      12 24.3   +27  25  d  Com                 vF,  S,  iF,  N
I3279    * 12 24.4   +12  51  x  Vir                 pF,  S;  2 st?
I3280   Gx 12 24.4   +13  14  m  Vir    0.7   15.  p S,  R,  bM,  mag  15.5
 4349   OC 12 24.5   -61  54  s  Cru   16.     7.4   Cl,  vB,  vL,  lC,  st  12...14
 4361   Pl 12 24.5   -18  48  s  Crv    1.8   10.  p vB,  L,  R,  vsmbMN,  r
 4365   Gx 12 24.5   +07  19  s  Vir    6.2   11.  p cB,  pL,  vlE,  gl,  smbM
 4386   Gx 12 24.5   +75  32  s  Dra    3.0   12.  p pB,  cL,  lE,  psmbM
I3281    ? 12 24.5   +07  49  x  Vir                 pB,  pS,  N,  stell
I3282      12 24.5   +25  40  d  Com                 eF,  vS,  R,  bM
I3283      12 24.5   +27  13  d  Com                 vF,  S,  R,  bM,  spir
 4367    - 12 24.6   +12  11  r  Vir                 vF,  S,  R
 4369   Gx 12 24.6   +39  23  s  CVn    2.5   12.  p cB,  S,  R,  mbMN,  r
I3284      12 24.6   +10  49  d  Vir                 vS,  R,  bM,  mag  14
I3285      12 24.6   +24  52  d  Com                 vF,  vS,  R,  bM,  in  dif  neb  E  25deg
I3286      12 24.6   +23  45  d  Com                 S,  pR
I3287      12 24.6   +24  36  d  Com                 eF,  cS,  iF,  in  dif  neby
 4368    - 12 24.7   +10  36  r  Vir                 vF,  vS
I3288      12 24.7   +24  57  d  Com                 vF,  vS,  R,  bM
I3292   Gx 12 24.8   +18  11  z  Com          15.  p F,  vS,  R,  bM
I3294      12 24.8   +25  36  d  Com                 eF,  cS,  dif
I3295      12 24.8   +28  42  d  Com                 cF,  S,  R,  bM
 4370   Gx 12 24.9   +07  27  s  Vir    1.6   14.  p pF,  pS,  lE,  bM
 4371   Gx 12 24.9   +11  42  s  Vir    3.9   10.8   B,  pS,  R,  gbM
I3291      12 24.9   +12  00  d  Vir                 R,  bM,  mag  14
I3293      12 24.9   +17  26  d  Com                 F,  eS,  R,  PN
 4366    ? 12 25.0   +07  27  A  Vir                 eF;  evidently  not  4370
 4375   Gx 12 25.0   +28  33  s  Com    1.6   14.  p F,  S,  R,  bM,  * nf  90"
I3289   Gx 12 25.0   -26  02  m  Hya    0.8   14.  p eF,  vS,  R,  v  diffic,  *7 nf,  *8 np
I3296   Gx 12 25.0   +24  23  z  Com          16.  p cF,  neb  *13,  *13  sp
I3297      12 25.0   +26  46  d  Com                 vF,  pL,  R,  bM,  spir
I3298      12 25.0   +17  02  d  Com                 S,  E  150deg  , bM
I3300   Gx 12 25.0   +25  57  u  Com    1.1   15.  p pF,  pS,  E  80deg  , bM
 4374   Gx 12 25.1   +12  53  s  Vir    5.0    9.3   vB,  pL,  R,  psbM,  r;  = M84
 4381    - 12 25.1   +48  50  r  CVn                 F,  S;  = 4357?
I3299      12 25.1   +27  23  d  Com                 vF,  vS,  R,  bM,  spir
 4377   Gx 12 25.2   +14  46  s  Com    1.8   11.8   B,  S,  R,  smbM
 4379   Gx 12 25.2   +15  36  s  Com    2.1   11.7   pS,  R,  psbMN
 4384   Gx 12 25.2   +54  30  s  UMa    1.5   13.  p cF,  S,  iR
 4392   Gx 12 25.2   +45  52  r  CVn          14.  p cF,  S,  R,  vgbM
I3290   Gx 12 25.2   -39  47  c  Cen    1.6         pF,  vS,  R,  * att,  4373  f
I3301      12 25.2   +14  09  d  Com                 vF,  vS,  R
I3302      12 25.2   +25  53  d  Com                 eF,  vS,  iF
I3303   Gx 12 25.2   +12  43  v  Vir    1.4         vF,  vS
I3304      12 25.2   +25  25  d  Com                 eF,  S,  R
I3305   Gx 12 25.2   +11  50  u  Vir    1.1   15.  p vlE,  bM,  mag  15
I3306      12 25.2   +27  24  d  Com                 vF,  vS,  iF,  N
 4373   Gx 12 25.3   -39  45  s  Cen    3.2   11.1   pB,  S,  R,  pgvmbM
 4376   Gx 12 25.3   +04  56  r  Vir          14.  p F,  S
 4378   Gx 12 25.3   +04  55  s  Vir    3.3   12.  p B,  S,  *8- 9 sf  3'
 4391   Gx 12 25.3   +64  56  s  Dra    1.4   14.  p cF,  S,  R,  sbM,  ***  sp
I3308   Gx 12 25.3   +26  42  u  Com    1.5   15.  p F,  cS,  E  70deg  , bM
 4380   Gx 12 25.4   +10  01  s  Vir    3.7   12.  p vF,  pL,  R,  lbM
 4382   Gx 12 25.4   +18  11  s  Com    7.1    9.2   vB,  pL,  R,  bM,  * np;  = M85
 4383   Gx 12 25.4   +16  28  s  Com    2.2   13.  p eS,  stellar  or  neb*  11-12
I3307    * 12 25.4   +14  09  x  Com                 R,  bM,  mag  15
I3309   Gx 12 25.4   +28  23  u  Com    1.4   16.  p F,  pS,  R,  bM,  spir
I 787   Gx 12 25.5   +16  06  m  Com    1.0   15.  p eF,  pS,  R,  B*  n,  4405  f
I3310    * 12 25.5   +15  40  x  Com                 vF,  S,  dif,  sbM
I3311   Gx 12 25.5   +12  15  u  Vir    2.1   15.  p vF,  cS,  mE  135deg
I3312      12 25.5   +23  35  d  Com                 eF,  S,  R,  bM,  v  diffic
I3313      12 25.5   +15  50  d  Com                 F,  vS,  R,  PN  ,  IC  3310  ssp
I3314      12 25.5   +23  35  d  Com                 vF,  S,  R,  bM
 4389   Gx 12 25.6   +45  41  s  CVn    2.7   12.  p pB,  pL,  iE,  vglbM
I3316      12 25.6   +26  10  d  Com                 eF,  vS,  bM;  neb?
I3317      12 25.6   +25  21  d  Com                 eF,  S,  E
 4385   Gx 12 25.7   +00  34  s  Vir    2.3   12.4   vF,  vS,  alm  stell
 4387   Gx 12 25.7   +12  49  s  Vir    1.9   12.0   pF,  vS,  R,  *13  90"  np,  np of  2
I3315      12 25.7   +12  18  d  Vir                 E,  bM,  mag  15
 4372   Gb 12 25.8   -72  40  s  Mus   18.6     7.8   glob.  cl.  ,  pF,  L,  R,  st  12...16
 4388   Gx 12 25.8   +12  40  s  Vir    5.1   11.1   vF,  E,  sf of  2
 4390   Gx 12 25.8   +10  27  s  Vir    1.8   13.  p vF,  pL,  R;  = IC  3319- 20
 4393   Gx 12 25.8   +27  33  s  Com    3.3   13.  p vF,  vL,  iF,  B*  p;  = IC  3323,  IC  3329
 4395   Gx 12 25.8   +33  33  s  CVn   12.9   10.2   eF,  vL,  np of  Dneb
I3318    * 12 25.8   +09  46  x  Vir                 pB,  S;  = *10.5
I3319      12 25.8   +10  23  x  Vir                 pF,  pS;  = 4390
I3320      12 25.8   +10  27  x  Vir                 pF,  pS,  iF,  FN;  = 4390
I3321      12 25.8   +26  05  d  Com                 vF,  vS,  R;  D*?
I3323   Gx 12 25.8   +27  33  t  Com    3.1   13.  p cF,  vS,  R,  bM,  neb*  att
I3324      12 25.8   +26  44  d  Com                 cF,  vS,  R,  bM,  spir
I3325      12 25.8   +23  54  d  Com                 F,  S
 4394   Gx 12 25.9   +18  13  s  Com    3.9   10.9   pB,  lE,  bM
 4399    - 12 25.9   +33  34  r  CVn                 vF,  forms  trapezium  with  4395,  4400,  4401
 4400    - 12 25.9   +33  34  r  CVn                 vF
 4401    - 12 25.9   +33  31  r  CVn                 vF,  vL,  psblM,  sf of  Dneb
I3322   Gx 12 25.9   +07  33  v  Vir    2.5         cF,  pS,  mE  130deg
I3326      12 25.9   +23  46  d  Com                 F,  S,  iF
I3328   Gx 12 25.9   +10  03  m  Vir    0.6   15.  p vF,  vS,  bM
I3329      12 25.9   +27  34  d  Com                 vF,  S,  iF,  att  4393
I3330   Gx 12 25.9   +30  51  v  Com    1.4         F,  cS,  E  pf,  gbM
 4396   Gx 12 26.0   +15  40  s  Com    3.5   13.  p vF,  pL,  mE
 4397  *** 12 26.0   +18  19  r  Com                 vF,  S,  4394  sp
I3327   Gx 12 26.0   +14  52  z  Com          15.  p bM,  mag  15
I3331   Gx 12 26.0   +11  48  m  Vir    0.2   15.  p eF,  cS,  E  78deg  , bM
 4398    * 12 26.1   +10  42  r  Vir                 F,  pS,  4390  p  14s  , 14'  s
 4402   Gx 12 26.1   +13  07  s  Vir    4.1   11.7   F,  L,  mE  90deg
 4405   Gx 12 26.1   +16  11  s  Com    2.0   13.  p pF,  S,  R,  vsbM,  r;  = IC  788?
I 788      12 26.1   +16  12  x  Com                 pB,  pL,  R,  4405  south;  = 4405?
I3332      12 26.1   +25  17  d  Com                 vF,  vS,  iF,  N
 4406   Gx 12 26.2   +12  57  s  Vir    7.4    9.2   vB,  L,  R,  gbMN,  r;  = M86
 4408   Gx 12 26.2   +27  53  r  Com          15.  p F,  S,  r
I3333    * 12 26.2   +13  08  x  Vir                 vF,  vS;  *14?
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I3334      12 26.2   +28  28  d  Com                vF,  pS,  R,  bM
 4403   Gx  12 26.3   -07  41  r  Vir          14.  p vF,  vS,  E
 4407    -  12 26.3   +12  39  r  Vir                f of 2 neb;  = 4413?
I 789   Gx  12 26.3   +07  27  x  Vir          15.  p F,  vS,  R,  N = 14m,  vF* close
I3335      12 26.3   +26  08  d  Com                eF,  vS,  R,  bM;  neb?
I3336   Gx  12 26.3   +26  49  z  Com          15.  p pB,  vS,  R,  bM
 4404   Gx  12 26.4   -07  41  r  Vir          14.  p vF,  vS,  E
 4414   Gx  12 26.4   +31  13  s  Com    3.6   10.3   vB,  L,  E,  g,  vsmbM  *
I3337      12 26.4   +25  19  d  Com                eF,  vS,  R,  bM,  spir
I3338      12 26.4   +25  53  d  Com                F,  vS,  R,  bM,  spir
I3341      12 26.4   +27  45  d  Com                vF,  cS,  dif
 4409    -  12 26.5   +02  30  r  Vir                vF,  pS,  r;  = 4420?
 4410   Gx  12 26.5   +09  01  s  Vir    1.3   14.  p pF,  vL,  R,  gbM
 4411   Gx  12 26.5   +08  52  s  Vir    2.2   12.8   vF,  L,  2'.5;  = IC 3339
 4413   Gx  12 26.5   +12  37  s  Vir    2.5   13.  p cF,  S,  gbM,  2 st n,  np
I 790   Gx  12 26.5   +09  01  m  Vir    0.5   15.  p vF,  vS,  f 4410
I3339      12 26.5   +08  52  x  Vir                *11  with  neb  nf;  = 4411
I3340   Gx  12 26.5   +16  50  m  Com    0.7   15.  p vS,  E 200deg
I3342      12 26.5   +27  08  d  Com                vF,  vS,  R,  spir,  sbM  *
I3344   Gx  12 26.5   +13  34  m  Com    0.5   15.  p R,  bM,  mag  14.5
I3345      12 26.5   +24  22  d  Com                eF,  S,  iF
 4412   Gx  12 26.6   +03  58  s  Vir    1.5   13.  p F,  pL,  R,  gbM,  r
 4415   Gx  12 26.6   +08  25  s  Vir    1.5   14.  p eF,  pS
I3343    ? 12 26.6   +08  53  x  Vir                eF,  vS,  ??
I3348      12 26.6   +25  37  d  Com                eF,  vS,  iF
I3346      12 26.7   +11  21  d  Vir                eS,  R,  bM,  mag  15.5
I3347      12 26.7   +10  53  d  Vir                R,  bM,  mag  15
I3349   Gx  12 26.7   +12  27  z  Vir          15.  p vS,  R,  lbM,  mag  15
I3351      12 26.7   +27  36  d  Com                eF,  S,  iF
I3353      12 26.7   +27  55  d  Com                eF,  S,  iF
 4416   Gx  12 26.8   +07  56  r  Vir          13.  p vF,  L,  R,  *7 sp 5'
 4417   Gx  12 26.8   +09  35  s  Vir    3.6   11.2   F,  pL,  E,  lbp
I3350    * 12 26.8   +09  27  x  Vir                *10.5  with  neb  sp
I3352    ? 12 26.8   +08  45  x  Vir                F,  pS,  E
I3355   Gx  12 26.8   +13  11  v  Vir    1.3         eF,  pS,  E 168deg
I3356   Gx  12 26.8   +11  34  t  Vir    1.4   15.  p R,  bM,  mag  16
I3357   Gx  12 26.8   +09  45  z  Vir          15.  p R,  bM,  mag  15
I3360      12 26.8   +26  03  d  Com                eF,  vS,  iF
 4418   Gx  12 26.9   -00  51  r  Vir          14.  p F or vF,  S or cL,  R or mE,  * nr
 4419   Gx  12 26.9   +15  03  s  Com    3.4   11.1   B,  pmE  135deg  +/-  ,  sbM
I3354    * 12 26.9   +12  06  x  Vir                eF,  S,  ?
I3358   Gx  12 26.9   +11  39  u  Vir    1.2   15.  p vF,  S
I3359      12 26.9   +23  30  d  Com                F,  S,  iF,  N,  *14  np
I3362      12 26.9   +26  41  d  Com                F,  vS,  bM,  spir
 4420   Gx  12 27.0   +02  30  s  Vir    2.2   13.  p F,  pL,  lE,  r;  = 4409?
 4421   Gx  12 27.0   +15  28  s  Com    2.7   11.6   pB,  pL,  pgbM,  B* np
I 791   Gx  12 27.0   +22  38  u  Com    1.2   14.  p BN = 12m
I3361      12 27.0   +10  38  d  Vir                R,  bM,  mag  15.5
I3363   Gx  12 27.0   +12  33  z  Vir          15.  p E,  bM,  mag  15
 4423   Gx  12 27.1   +05  52  s  Vir    2.3   14.  p vF,  vS,  E
I 792   Gx  12 27.1   +16  20  u  Com    1.8   15.  p F,  S,  gbM
I3364      12 27.1   +25  34  d  Com                vF,  vS,  R,  bM
I3365   Gx  12 27.1   +15  54  s  Com    1.9   14.  p pL,  vmE  240deg
 4424   Gx  12 27.2   +09  25  s  Vir    3.7   11.6   F,  pL,  iR,  bM
 4425   Gx  12 27.2   +12  44  s  Vir    3.4   11.9   pF,  S,  R,  bM
 4426   D*  12 27.2   +27  51  r  Com                Cl,  F,  S
 4427   D*  12 27.2   +27  51  r  Com                vF;  2 or 3 F st in neb?
I3367   Gx  12 27.2   +26  57  z  Com          16.  p F,  vS,  R,  att  2nd  np
 4422   Gx  12 27.3   -05  49  r  Vir          14.  p F,  vS,  R,  psbM,  2 S st nr
 4441   Gx  12 27.3   +64  48  s  Dra    4.7   14.  p pB,  S,  iR,  bM
I3366    ? 12 27.3   +09  25  x  Vir                vF,  vS
I3368      12 27.3   +16  25  d  Com                vS,  vlE,  PN
I3369      12 27.3   +16  02  d  Com                vF,  bM,  mag  14
I3371   Gx  12 27.3   +10  52  u  Vir    1.9   15.  p F,  pL,  vmE  225deg
 4429   Gx  12 27.4   +11  07  s  Vir    5.5   10.2   B,  L,  cE,  psbM,  *10  nf
 4430   Gx  12 27.4   +06  15  s  Vir    2.7   12.  p cF,  L,  R,  gbM
I3372      12 27.4   +25  17  d  Com                vF,  vS,  bM,  spir
 4428   Gx  12 27.5   -08  10  s  Vir    1.9   13.  p vF,  pL
 4431   Gx  12 27.5   +12  18  s  Vir    2.0   12.8   vF,  vS,  cE,  gbM
 4434   Gx  12 27.5   +08  09  s  Vir    1.6   13.  p pF,  vS
I3373      12 27.5   +25  27  d  Com                F,  cS,  iF
I3374   Gx  12 27.5   +09  59  z  Vir          16.  p R,  bM,  mag  15.5
 4432   Gx  12 27.6   +06  14  r  Vir          15.  p 2 st in eF neb
 4433   Gx  12 27.6   -08  17  s  Vir    2.3   13.  p pF,  pL,  lE
I3370   Gx  12 27.6   -39  20  s  Cen    2.8   11.1   pB,  pL,  R,  *8.5  p 4'
 4435   Gx  12 27.7   +13  05  s  Vir    3.0   10.9   vB,  cL,  R,  np of 2
 4436   Gx  12 27.7   +12  19  s  Vir    1.9   13.1   cF,  S,  gbM
I3375      12 27.7   +27  22  d  Com                F,  vS,  R,  att  *14  sp
 4438   Gx  12 27.8   +13  01  s  Vir    9.3   10.1   B,  cL,  vlE,  r,  sf of 2
 4456   Gx  12 27.8   -30  07  r  Hya          15.  p eeF,  vS,  *13  att
I3376   Gx  12 27.8   +26  59  u  Com    1.8   14.  p pB,  S,  R,  bM
 4440   Gx  12 27.9   +12  18  s  Vir    2.0   11.8   B,  pS,  R,  bM,  r
I3377      12 27.9   +24  56  d  Com                pF,  vS,  R,  bM
I 793      12 28.0   +09  26  x  Vir                eF,  S,  mE,  3 others  in field;  = 4445
 4442   Gx  12 28.1   +09  48  s  Vir    4.6   10.5   vB,  pL,  R,  smbM
 4443    * 12 28.1   +13  08  r  Vir                F,  S
I 794   Gx  12 28.1   +12  06  v  Vir    1.7         F,  S,  E pF,  bM
I3378      12 28.1   +17  18  d  Com                1st  of 2 neb,  1'apart,  mag  15.5
I3379      12 28.1   +17  18  d  Com                2nd  of 2 neb,  1'apart,  mag  15.5
I3380      12 28.1   +26  40  d  Com                F,  vS,  bM,  spir
 4446   Gx  12 28.2   +13  55  r  Com          15.  p eeF,  pS,  R
 4448   Gx  12 28.2   +28  37  s  Com    4.0   11.1   B,  L,  E 90deg  ,  sbM
 4449   Gx  12 28.2   +44  06  s  CVn    5.1    9.4   vB,  cL,  mE,  D or bifid,  rrr,  *9 f 5'
I3382   Gx  12 28.2   +13  33  u  Com    1.0   16.  p F,  pS,  mE  150deg
I3383   Gx  12 28.2   +10  17  m  Vir    0.7   15.  p R,  bM,  mag  15
I3384      12 28.2   +25  05  d  Com                eF,  vS,  iF
I3385      12 28.2   +25  26  d  Com                eF,  pS,  R,  bM,  dif
 4445   Gx  12 28.3   +09  26  s  Vir    2.8   12.8   vF,  pL,  mE;  = IC 793
 4447   Gx  12 28.3   +13  54  r  Com          15.  p eeF,  pS,  R
I3381   Gx  12 28.3   +11  47  v  Vir    1.5         eF,  vS,  stell
I3387      12 28.3   +28  00  d  Com                vF,  S,  viF
 4439   OC  12 28.4   -60  06  s  Cru    4.     8.4   Cl,  S,  st 11...12
I3386      12 28.4   +13  11  d  Vir                vF,  cS,  E 90deg
I3388   Gx  12 28.4   +12  49  z  Vir          15.  p vS,  R,  lbN,  mag  15
I3389      12 28.4   +27  51  d  Com                vF,  S,  iF
I3391   Gx  12 28.4   +18  24  u  Com    1.1   14.  p cS,  vlE,  sbMF*;  spir?
 4450   Gx  12 28.5   +17  05  s  Com    4.8   10.1   B,  L,  R,  gvmbM  *,  r,  B* sp
I 795   Gx  12 28.5   +23  18  z  Com          15.  p pB,  S,  stellar,  13m
I3390      12 28.5   +24  49  d  Com                vF,  vS,  R,  bM
 4444   Gx  12 28.6   -43  16  t  Cen    1.6         eF,  L,  R,  vgbM
 4451   Gx  12 28.7   +09  16  s  Vir    1.5   12.5   pB,  pS,  R,  bM,  *13  s
 4452   Gx  12 28.7   +11  45  s  Vir    2.4   12.4   pB,  S,  vmE
 4453   Gx  12 28.7   +06  30  v  Vir    0.6         F,  pS,  bM,  r
 4455   Gx  12 28.7   +22  49  s  Com    2.8   13.  p F,  L,  E,  gbM,  2 B st nf
I3392   Gx  12 28.7   +15  00  v  Com    2.4         B,  L,  mE  225deg  ,  mbM
I3393   Gx  12 28.7   +12  55  v  Vir    1.4         S,  E 125deg  ,  bM,  mag  14
I3395      12 28.7   +25  02  d  Com                vF,  vS,  R,  bM
I3396      12 28.7   +25  03  d  Com                vF,  vS,  R,  bM,  others  n
 4454   Gx  12 28.8   -01  56  s  Vir    2.2   12.1   F,  L,  R,  gbM,  er
 4460   Gx  12 28.8   +44  52  s  CVn    4.4   12.  p B,  pL,  E 123deg  ,  psbM
I3394   Gx  12 28.8   +26  47  m  Com    0.4   16.  p F,  S,  bM,  spir
I3397      12 28.8   +25  44  d  Com                F,  S,  v iF
 4484   Gx  12 28.9   -11  39  r  Vir          14.  p pF,  S,  R,  gbM
I3399      12 28.9   +25  42  d  Com                vF,  vS,  R,  bM
 4457   Gx  12 29.0   +03  34  s  Vir    3.0   10.8   cB,  pS,  R,  smbMN
 4458   Gx  12 29.0   +13  15  s  Vir    1.9   12.1   pB,  S,  R,  bM,  p of 2
 4459   Gx  12 29.0   +13  59  s  Com    3.8   10.4   pB,  pL,  iR,  bM,  r,  *8 sf 2'
 4461   Gx  12 29.0   +13  11  s  Vir    3.7   11.2   pF,  S,  R,  bM,  f of 2
I3398    * 12 29.0   +13  34  x  Com                cF,  vS
I3400    ? 12 29.0   +09  24  x  Vir                cB,  cS,   = *10
I3401      12 29.0   +26  28  d  Com                vF,  vS,  R

I3402   Gx  12 29.0   +28  51  u  Com    1.0   16.  p vF,  cL,  E 10deg  ,  * np,  conn?
I3403   Gx  12 29.0   +24  38  z  Com          16.  p cF,  S,  pR,  bM
I3405      12 29.0   +37  44  d  CVn                F,  S,  R,  vlbM
I3407   Gx  12 29.0   +27  47  u  Com    1.2   15.  p cF,  cS,  E 150deg  ,  bM;  spir?
I3406   Gx  12 29.1   +27  38  m  Com    0.5   16.  p cF,  S,  bM,  spir
I3410   Gx  12 29.1   +19  00  z  Com          16.  p bM,  mag  15.5
I3404    ? 12 29.2   +07  09  x  Vir                cB,  cS,  R,  mbM
I3411      12 29.2   +24  35  d  Com                eF,  S,  iF,  neby  sf
 4462   Gx  12 29.3   -23  10  s  Crv    3.7   12.  p pB,  pS,  E 130deg  ,  sbM
I3408    * 12 29.3   +11  53  x  Vir                B,  stell;  *9.5?
I3412   Gx  12 29.3   +09  59  z  Vir          15.  p eF,  cS
 4464   Gx  12 29.4   +08  10  s  Vir    1.1   12.7   F,  vS,  R,  pgbM
 4465   Gx  12 29.4   +08  02  r  Vir          15.  p vF,  v dif
I 796   Gx  12 29.4   +16  24  u  Com    1.4   14.  p F,  S,  E ns,  r
I3409   Gx  12 29.4   +14  46  m  Com    0.6   17.  p bM,  mag  15
I3413   Gx  12 29.4   +11  26  v  Vir    1.6         vF,  vS,  R,  bM
I3414   Gx  12 29.4   +06  46  v  Vir    1.7         cF,  cS,  mbM
I3415      12 29.4   +26  46  d  Com                F,  vS,  bM,  spir;  neb*?
 4466   Gx  12 29.5   +07  42  s  Vir    1.4   15.  p vF,  pS,  iR
 4467   Gx  12 29.5   +08  00  v  Vir    0.7   14.5   vF,  vS,  lE
 4468   Gx  12 29.5   +14  03  s  Com    1.5   13.0   F,  cL
 4469   Gx  12 29.5   +08  45  s  Vir    3.9   12.  p pF,  pL,  mE,  bM,  r
 4470   Gx  12 29.6   +07  49  s  Vir    1.5   13.  p F,  pL,  iR,  bM;  = IC 3417
I3416   Gx  12 29.6   +10  47  m  Vir    0.1   15.  p S,  mE  250deg
I3421   OC  12 29.6   +26  14  x  Com                Cl,  F,  cS,  R,  bM
 4471   Gx  12 29.7   +07  55  h  Vir    0.2   15.  p vF,  vS
I3417    * 12 29.7   +07  52  x  Vir                eF,  vS,  ?*
I3418   Gx  12 29.7   +11  24  v  Vir    1.5         vF,  wisp
I3419      12 29.7   +15  02  d  Com                vF,  R,  mag  16
I3420    * 12 29.7   +13  27  x  Com                vF,  S,  R,  ??
I3422      12 29.7   +14  42  d  Com                bM,  mag  15
I3424      12 29.7   +24  24  d  Com                eF,  pS,  iF
 4472   Gx  12 29.8   +08  00  s  Vir    8.9    8.4   vB,  L,  R,  mbM,  r;  = M49
 4473   Gx  12 29.8   +13  26  s  Com    4.5   10.2   pB
 4475   Gx  12 29.8   +27  15  s  Com    2.1   15.  p eF,  pL,  R
 4481   Gx  12 29.8   +64  03  r  Dra          15.  p pF,  vS,  R,  *13  att
I3423    ? 12 29.8   +13  40  x  Com                vF,  vS
 4474   Gx  12 29.9   +14  04  s  Com    2.3   11.8   pF,  R,  r
I3425   Gx  12 29.9   +10  36  u  Vir    1.9   15.  p bM,  mag  14
 4463   OC  12 30.0   -64  48  s  Mus    5.     7.2   Cl,  P,  vlC
 4476   Gx  12 30.0   +12  21  s  Vir    1.9   12.3   F,  S,  R,  bM,  1st  of 3
 4477   Gx  12 30.0   +13  38  s  Com    4.0   10.4   pB,  cL
I3426    * 12 30.0   +13  36  x  Com                vF,  vS
I3427   Gx  12 30.1   +10  46  x  Vir          14.  p F,  vS,  exc  Nf
I3428      12 30.1   +23  40  d  Com                F,  S,  R,  bM
I3429      12 30.1   +23  33  d  Com                vF,  S,  iF,  N
 4482   Gx  12 30.2   +10  47  r  Vir          14.  p eF,  pL;  = IC 3427
I3430   Gx  12 30.2   +09  04  u  Vir    1.2   15.  p eF,  cS,  dif
 4478   Gx  12 30.3   +12  20  s  Vir    2.0   11.2   pB,  S,  R,  psbM,  2nd  of 3
 4479   Gx  12 30.3   +13  35  s  Com    1.8   12.5   pB,  pL
 4480   Gx  12 30.4   +04  15  s  Vir    2.6   12.4   pF,  pS,  E,  bs
I3431    * 12 30.4   +11  35  x  Vir                vS,  R
I3432   Gx  12 30.4   +14  10  m  Com    0.6   15.  p B,  S,  R
I3433      12 30.4   +17  18  d  Com                bM,  mag  14.5
 4485   Gx  12 30.5   +41  42  s  CVn    2.4   12.0   B,  pS,  iR,  np of 2
I3434   Gx  12 30.5   +18  48  z  Com          15.  p bM,  mag  15
I3436   Gx  12 30.5   +19  39  m  Com    0.4   15.  p bM,  mag  14
 4490   Gx  12 30.6   +41  38  s  CVn    5.9    9.8   vB,  vL,  mE  130deg  ,  r,  sf of 2
I3435   Gx  12 30.6   +15  07  u  Com    1.2   16.  p S,  mE  135deg  ,  sbM
 4483   Gx  12 30.7   +09  01  s  Vir    1.8   13.  p pB,  pS,  R,  bM
 4486   Gx  12 30.8   +12  24  s  Vir    7.2    8.6   vB,  vL,  R,  mbM,  3rd  of 3;  = M87
 4489   Gx  12 30.8   +16  45  s  Com    2.2   13.  p pF,  cS,  R,  gbM
I3437   Gx  12 30.8   +11  20  z  Vir          15.  p bM,  mag  15
 4488   Gx  12 30.9   +08  22  s  Vir    3.6   13.  p vF,  vS,  lE
 4491   Gx  12 31.0   +11  29  s  Vir    1.9   12.5   F,  L,  R
 4492   Gx  12 31.0   +08  05  s  Vir    2.0   12.5   pF,  pL,  vglbM,  2 st nr;  = IC 3438
I3438      12 31.0   +08  05  x  Vir                cF,  S,  FN;  = 4492
I3439      12 31.0   +25  34  d  Com                vF,  cS,  iF,  sev  N
 44B7   Gx  12 31.1   -08  03  s  Vir    4.1   11.  p F,  vL,  er
I3440      12 31.1   +12  02  d  Vir                eF,  pS,  lE 30deg
 4493   Gx  12 31.2   +00  37  r  Vir          15.  p vF,  vS,  iR
I3441   Gx  12 31.2   +28  51  m  Com    0.4   15.  p F,  S,  bM,  spir
I3444      12 31.2   +27  33  d  Com                vF,  vS,  bM,  spir
 4495   Gx  12 31.3   +29  09  r  Com          14.  p pF,  cS,  R,  pslbM
I3442   Gx  12 31.3   +14  07  v  Com    1.5         F,  vS,  R,  lbM
I3443   Gx  12 31.3   +12  19  m  Vir    0.2   16.  p bM,  mag  15.5
I3445      12 31.3   +12  44  d  Vir                F,  eS,  R
I3446   Gx  12 31.3   +11  29  z  Vir          15.  p bM,  mag  14
 4494   Gx  12 31.4   +25  47  s  Com    4.8    9.9   vB,  pL,  R,  vsmbMN
 4500   Gx  12 31.4   +57  58  s  UMa    1.9   13.  p B,  cS,  E,  pgbM,  *9 f 50"
I3447    * 12 31.4   +10  40  x  Vir                F,  eS,  R
I3448      12 31.4   +17  12  d  Com                vF,  vlE
I3449   D*  12 31.4   +25  55  x  Com                eF,  vS,  bM,  spir
I3450   Gx  12 31.4   +26  48  x  Com                vF,  vS,  spir,  ? (4494  sp)
I3451   Gx  12 31.4   +28  51  m  Com    0.5   15.  p F,  S,  bM,  spir
 4497   Gx  12 31.5   +11  37  s  Vir    2.3   12.6   vF  or  pF;  = IC 3452
I3452      12 31.5   +11  37  x  Vir                pF,  pS,  E 100deg  ;  = 4497
I3453   Gx  12 31.5   +14  51  s  Com    1.2   15.  p F,  S,  E 160deg  ,  lbM
 4496   Gx  12 31.6   +03  56  s  Vir    3.9   12.  p F,  cL,  biN  or  Dneb
I3454   Gx  12 31.6   +27  30  u  Com    1.3   16.  p F,  S,  iF,  dif,  att  *11  n
 4498   Gx  12 31.7   +16  51  s  Com    3.2   13.  p vF,  pL,  E;  biN?
 4510   Gx  12 31.7   +64  15  r  Dra          14.  p Cl,  vS,  st F,  mC
I3455    ? 12 31.7   +25  47  x  Com                eF,  S,  iF
I3456      12 31.7   +28  21  d  Com                vF,  pS,  iF
I3458      12 31.7   +28  09  d  Com                F,  S,  bM,  spir
 4529   Gx  12 31.8   +20  30  r  Com          15.  p eF,  L
I3460      12 31.8   +27  23  d  Com                F,  S,  iF
 4513   Gx  12 31.9   +66  20  r  Dra          14.  p F,  R  (vS  Cl?)
I 797   Gx  12 31.9   +15  07  u  Com    1.2   14.  p F,  S,  R,  gbM
I3457   Gx  12 31.9   +12  39  v  Vir    1.6         S,  R,  lbM
I3459   Gx  12 31.9   +12  10  u  Vir    1.2   15.  p vF,  pS,  dif
 4501   Gx  12 32.0   +14  25  s  Com    6.9    9.5   B,  vL,  vmE;  = M88
I3461   Gx  12 32.0   +11  53  m  Vir    0.6   15.  p vF,  vS
I3462      12 32.0   +15  18  d  Com                vF,  eS,  R
I3464    * 12 32.0   +26  00  x  Com                eF,  vS,  bM,  spir
 4499   Gx  12 32.1   -39  58  r  Cen                vF,  L,  R,  vglbM
 4502   Gx  12 32.1   +16  42  r  Com          15.  p vF,  S
 4503   Gx  12 32.1   +11  11  s  Vir    3.5   11.1   pB,  S,  R,  gbM
I3463   D*  12 32.1   +12  19  x  Vir                vF,  cS,  E 40deg
 4506   Gx  12 32.2   +13  25  s  Com    1.6   14.  p cF,  pmE  90deg  +/-  ,  gbM,  *9 p 8s
 4511   Gx  12 32.2   +56  29  r  UMa          14.  p pF,  vS,  iR,  vgbM
I3465      12 32.2   +12  04  d  Vir                bM,  mag  16
I3466      12 32.2   +11  48  d  Vir                bM,  mag  15
I3469      12 32.2   +25  48  d  Com                eF,  S,  E 50deg
 4504   Gx  12 32.3   -07  34  s  Vir    4.0   12.  p pB,  cL,  iE,  gvlbM,  er
 4505    -  12 32.3   +03  59  r  Vir                vF,  cL,  r,  f of 2;  = 4496?
I3467      12 32.3   +11  47  d  Vir                cS,  vmE  255deg  ,  sbM  *
I3468   Gx  12 32.3   +10  14  x  Vir                bM,  mag  13.5
I3471   Gx  12 32.3   +16  01  m  Com    0.7   16.  p F,  vS,  R
I3472      12 32.3   +24  44  d  Com                eF,  S,  iF
I3473   Gx  12 32.3   +18  14  u  Com    1.1   15.  p S,  R,  lbM
 4508    -  12 32.4   +05  50  r  Vir                vS,  R,  sbM  *13
I3470   Gx  12 32.4   +11  15  x  Vir                bM,  mag  13.5
 4514   Gx  12 32.5   +29  44  r  Com          14.  p eF,  vS,  R,  bM
I 798   Gx  12 32.5   +15  24  z  Com          15.  p vF,  eS,  R
 4512   Gx  12 32.6   +63  54  r  Dra          14.  p pB,  S,  R,  psbM
I3474   Gx  12 32.6   +02  40  v  Vir    2.2         pF,  E spnf,  dif,  *17  np,  B* sf
I3477    * 12 32.6   +26  03  x  Com                vF,  vF,  bM,  spir
I3475   Gx  12 32.7   +12  46  s  Vir    2.6   13.3   vF,  pS,  R,  dif
I3476   Gx  12 32.7   +14  03  s  Com    2.2   12.7   pF,  pL,  lbM
I3478   Gx  12 32.7   +14  12  v  Com    1.3         vF,  vS,  bM
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I3479      12 32.7   +25  24  d  Com                vF,  vS,  iF
I3480      12 32.7   +26  50  d  Com                vF,  S,  E 90deg  , bM
 4437      12 32.8   +00  07  A  Vir                F, eE 75deg  , *10  nf,  place  that  of  *; =
    4517
 4517   Gx 12 32.8   +00  07  s  Vir   10.2   10.5   cB,  vL,  vmE  89deg  , pB* in cont
 4521   Gx 12 32.8   +63  57  r  Dra          13.  p pB,  S,  pmE,  pgbM,  *10  p 12s
I3481   Gx 12 32.9   +11  24  s  Vir    0.7   14.0   bM,  mag  13
I3568   Pl 12 32.9   +82  33  s  Cam    0.1   12.  p PN   or  neb  *9.5;  *13  p 15"
 4515   Gx 12 33.0   +16  15  s  Com    1.6   13.  p F,  vS,  bM  *
I3482      12 33.0   +27  50  d  Com                vF,  S,  bM,  spir
 4509   Gx 12 33.1   +32  06  s  CVn    1.1   14.  p vF,  S,  R,  lbM
 4516   Gx 12 33.1   +14  34  s  Com    1.9   14.  p F,  pS,  R,  r
I3484   Gx 12 33.1   +17  24  m  Com    0.6   15.  p S,  R,  bM
I3488   Gx 12 33.1   +26  21  x  Com                F,  S,  R,  bM
 4518   Gx 12 33.2   +07  51  r  Vir          15.  p F,  S,  R,  bM
I3483   Gx 12 33.2   +11  21  s  Vir    0.5   15.0   bM,  mag  14
I3485    * 12 33.2   +09  13  x  Vir                eF,  S;  ?
I3486      12 33.2   +12  52  d  Vir                F,  S,  R,  dif
I3487      12 33.2   +09  24  d  Vir                vF,  vS
I3489   Gx 12 33.2   +12  14  m  Vir    0.6   15.  p bM,  mag  13
I3490   Gx 12 33.2   +10  55  z  Vir    0.6   16.  p vF,  S,  vmE  240deg
I3491   Gx 12 33.2   +27  06  x  Com                F,  S,  iF
I3492   Gx 12 33.2   +12  51  s  Vir          15.  p sbM,  prob  spiral
I3494   Gx 12 33.2   +27  35  x  Com                vF,  vS,  neb*,  *15  np
I3493    * 12 33.4   +09  23  x  Vir                eF,  vS
 4519   Gx 12 33.5   +08  39  s  Vir    3.1   11.7   F,  pL,  R,  bM,  r
I3495   Gx 12 33.5   +26  47  x  Com                vF,  cS,  iF,  diffic
I3496   Gx 12 33.5   +26  44  x  Com                vF,  cS,  iF,  *15  np
I3497      12 33.5   +25  29  d  Con                vF,  vS,  R,  bM
I3498    * 12 33.5   +26  44  x  Com                vF,  S,  iF
 4522   Gx 12 33.7   +09  10  s  Vir    3.7   13.  p eF,  pL,  lE,  vlbM
I 799      12 33.7   -07  24  x  Vir                eF,  eS,  R  (eF*  att  p?);  = 4520
I3499   Gx 12 33.7   +10  59  s  Vir    1.6   13.3   cS,  E  (wisps)  130deg  ,  bM
I3502   Gx 12 33.7   +26  37  x  Com                eF,  S,  iF
 4520   Gx 12 33.8   -07  23  s  Vir                vF,  S,  2 vS  st  inv
 4523   Gx 12 33.8   +15  10  s  Com    2.6   14.  p Cl + neb,  close  to  a **
 4524   Gx 12 33.8   -12  01  r  Crv          14.  p vF,  iF,  bM
 4525   Gx 12 33.8   +30  17  s  Com    2.9   13.  p F,  pL,  iR,  bM
 4530    - 12 33.8   +41  21  r  CVn                nebulous  * 4 mag  ???  (8  CVn)
I 801   Gx 12 33.8   +52  15  u  CVn    1.2   15.  p eeF,  S,  R,  * close  n
I3500   Gx 12 33.8   +13  58  z  Com          15.  p S,  E 90deg  , sbM  *
I3501   Gx 12 33.8   +13  19  m  Com    0.6   15.  p F,  S,  R,  bMN
I3503      12 33.8   +37  47  d  CVn                eF,  vS,  bMN
I 800   Gx 12 33.9   +15  21  v  Com    1.7                F,  S,  R,  gbM
 4526   Gx 12 34.0   +07  42  s  Vir    7.2    9.6   vB,  vL,  mE  120deg  +/-  , psmbM,  bet  2 st  7m
 4527   Gx 12 34.1   +02  39  s  Vir    6.3   10.4   pB,  L,  pmE  69deg  , mbM
 4528   Gx 12 34.1   +11  19  s  Vir    1.8   11.7   pF,  cS,  R,  bM,  *9  f  30s
 4534   Gx 12 34.1   +35  31  s  CVn    3.0   12.  p cF,  L,  lE,  vglbM,  r
I3504    ? 12 34.1   +06  53  x  Vir                eF,  vS,  nr  *10
I3505   Gx 12 34.1   +15  57  m  Com    0.8   15.  p F,  S,  E
I3507      12 34.1   +25  22  d  Com                vF,  vS,  iF
I3508   Gx 12 34.1   +26  40  x  Com                cF,  S,  bM,  spir
I3506      12 34.2   +12  44  d  Vir                vF,  R
I3511    ? 12 34.2   +27  21  x  Com                vF,  S,  iF,  N
I3512    ? 12 34.2   +27  22  x  Com                vF,  S,  iF,  N
I3513    ? 12 34.2   +27  20  x  Com                vF,  S,  iF,  N
 4531   Gx 12 34.3   +13  05  s  Vir    3.0   13.  p F,  pL,  R,  vgbM
 4532   Gx 12 34.3   +06  28  s  Vir    2.9   11.9   pB,  pL,  pmE,  vgbM,  r
 4535   Gx 12 34.3   +08  12  s  Vir    6.8    9.8   pF,  vL,  r,  spiral  neb
I3509   Gx 12 34.3   +12  04  z  Vir          15.  p bM,  mag  14
I3510   Gx 12 34.3   +11  04  u  Vir    1.1   15.  p eF,  bM,  mag  15,  *10  nf
I3514   D* 12 34.3   +26  42  x  Com                vF,  vS,  bM,  spir
I3515      12 34.3   +27  52  d  Com                F,  S,  iF
I3516   Gx 12 34.3   +27  27  x  Com                vF,  S,  iF,  N
 4533   Gx 12 34.4   +02  20  s  Vir    2.0   15.  p F,  4536  sf
 4536   Gx 12 34.5   +02  11  s  Vir    7.4   10.4   B,  vL,  mE  110deg  ,  sbM,  er
I3517   Gx 12 34.5   +09  09  u  Vir    1.5   15.  p eF,  pS,  mE  28deg  ;  ?
I3518   Gx 12 34.5   +09  37  u  Vir    1.3   15.  p cS,  mE  210deg  ,  bM
I3519    ? 12 34.5   +15  34  x  Com                vF,  vS,  R
I3520   Gx 12 34.5   +13  30  z  Com          15.  p vF,  R
 4539   Gx 12 34.6   +18  12  s  Com    3.5   12.0   pB,  pmE
 4545   Gx 12 34.6   +63  31  s  Dra    2.8   13.  p F,  L,  iR,  vgbM,  S* nf
I3521   Gx 12 34.6   +07  09  x  Vir                pF,  cS,  E 45deg  ,  bM
 4538   Gx 12 34.7   +03  20  r  Vir          15.  p eF,  vS,  nearly  R
I3523      12 34.7   +14  01  d  Com                vF,  R
I3524   D* 12 34.7   +14  14  x  Com                cF,  S;  *12.5?
I3526      12 34.7   +25  41  d  Com                F,  vS,  R,  bM
I3527   D* 12 34.7   +26  09  x  Com                F,  vS,  R,  bM  *
 4540   Gx 12 34.8   +15  33  s  Com    2.0   12.  p F,  pS,  bM,  r
 4542   Gx 12 34.8   +50  50  r  CVn          15.  p eF,  pL,  R
 4547   Gx 12 34.8   +58  56  r  UMa          15.  p vF,  pS,  E,  vgbM,  *9  f  2',  p  of  2
 4549   Gx 12 34.8   +58  56  r  UMa          15.  p eF,  pS,  E,  f  of  2
I3522   Gx 12 34.8   +15  13  v  Com    1.5                vF,  S,  mE  90deg
I3525      12 34.8   +10  10  d  Vir                vF,  R
I3529      12 34.8   +25  42  d  Com                F,  vS,  R,  bM
I3530   Gx 12 34.8   +17  48  z  Com          15.  p F,  vS,  R
I3528   Gx 12 34.9   +15  34  v  Com    0.7                bM,  mag  14
I3531   Gx 12 34.9   +26  38  x  Com                vF,  vS,  bM,  spir
I3532      12 35.0   +25  53  d  Com                vF,  vS,  bM,  spir
I3533   Gx 12 35.0   +25  46  z  Com          16.  p pF,  vS,  R,  bM
 4537   Gx 12 35.2   +50  50  r  CVn          16.  p eeF,  S,  R,  nearly  bet  2 st
 4541   Gx 12 35.2   -00  13  s  Vir    1.8   14.  p F,  S,  R,  gbM
I3534      12 35.2   +15  00  d  Com                vF,  cS,  R
I3535      12 35.2   +25  44  d  Com                F,  vS,  R,  bM
I3536   Gx 12 35.2   +26  32  x  Com                vF,  S,  iF
I3538    * 12 35.2   +26  14  x  Com                eF,  S,  iF
I3539      12 35.3   +23  59  d  Com                eF,  S,  R,  bM,  *13  sp
 4543   Gx 12 35.4   +06  07  r  Vir          14.  p pF,  cS,  R,  bM
 4548   Gx 12 35.4   +14  30  s  Com    5.4   10.2   B,  L,  lE,  lbM;  = M91
I3537   D* 12 35.4   +07  39  x  Vir                vF,  S,  ?
I3540   Gx 12 35.4   +12  45  m  Vir    0.4   15.  p vS,  R,  sev  condens
I3541      12 35.4   +23  58  d  Com                eF,  S,  R
 4546   Gx 12 35.5   -03  48  s  Vir    3.5   10.3   vB,  cL,  pmE  78deg  ,  vsmbMN
 4550   Gx 12 35.5   +12  13  s  Vir    3.5   11.6   pB,  S,  vlE,  sp  of  2
 4507   Gx 12 35.6   -39  55  s  Cen    2.3   13.  p pB,  S,  R,  psmbM  *16
 4544   Gx 12 35.6   +03  02  s  Vir    2.1   14.  p vF,  S,  R,  bet  2 st
 4551   Gx 12 35.6   +12  16  s  Vir    2.0   11.9   pB,  S,  R,  bM,  nf  of  2
 4562   Gx 12 35.6   +25  51  s  Com    2.5   14.  p S,  sp  4565
 4552   Gx 12 35.7   +12  33  s  Vir    4.2    9.8   pB,  pS,  R,  gmbM;  = M89
 4554    - 12 35.7   +11  11  r  Vir                vF
 4555   Gx 12 35.7   +26  31  s  Com    1.7   14.  p B,  pS,  iR,  vsmbM  *12
I3543   Gx 12 35.7   +26  17  v  Com    1.1                vF,  S,  lE  150deg
I3545      12 35.7   +26  31  x  Com                pB,  S,  R,  bM;  = 4555
I3546   Gx 12 35.7   +26  13  x  Com                F,  S,  lE  150deg
 4556   Gx 12 35.8   +26  54  s  Com    1.5   14.  p F,  pL
 4558   Gx 12 35.8   +27  01  r  Com          15.  p vF,  nf  of  2  (or  3?);  = IC  3556
I 802   Nb 12 35.8   +74  15  x  Dra    1.                vF,  S,  stellar
I3542      12 35.8   +11  40  d  Vir                bN,  mag  14.5
I3544   D* 12 35.8   +14  18  x  Com                cF,  vS;  *12.5?
I3547   D* 12 35.8   +26  20  x  Com                vF,  vS,  iF
I3549    * 12 35.8   +26  24  x  Com                vF,  vS,  bM,  spir
 4563   Gx 12 35.9   +26  59  r  Com          15.  p F,  vS,  R,  mbM
 4566   Gx 12 35.9   +54  13  s  UMa    1.5   14.  p pF,  S,  iR,  gbM
 4572   Gx 12 35.9   +74  15  r  Dra          15.  p eF,  S
I3548      12 35.9   +10  57  d  Vir                vF,  eS,  R
I3550      12 35.9   +27  56  d  Com                N  inv  in  4559
I3551      12 35.9   +27  58  d  Com                N  inv  in  4559
I3552      12 35.9   +28  00  d  Com                N  inv  in  4559
I3553    ? 12 35.9   +26  12  x  Com                vF,  vS,  R,  bM
I3554      12 35.9   +27  56  d  Com                N  inv  in  4559  (2s   p,  1'.8  s)
I3555      12 35.9   +28  00  d  Com                N  inv  in  4559  (1s  .5  p,  2'.0  n)

 4559   Gx 12 36.0   +27  58  s  Com   10.5    9.9   vB,  vL,  mE  150deg  ,  gbM,  3 st  f
I3556   Gx 12 36.0   +26  58  x  Com                F,  S,  R,  bM
 4553   Gx 12 36.1   -39  27  v  Cen    2.1          F,  vlE,  glbM
 4557   Gx 12 36.1   +26  57  r  Com          15.  p nebulous  *
 4560    - 12 36.1   +07  41  r  Vir                cB,  pL,  R,  gbM
 4561   Gx 12 36.1   +19  20  s  Com    1.5   13.  p pB,  pL,  vlE,  lbM,  r;  = IC  3569
I3557   Gx 12 36.1   +16  38  m  Com    0.7   15.  p bM,  mag  15.5
I3559   Gx 12 36.1   +26  59  x  Con                vF,  vS,  R,  bM
I3560   Gx 12 36.1   +27  05  x  Con                vF,  vS,  R,  bM
I3561   Gx 12 36.1   +26  54  x  Con                cF,  vS,  R,  bM  *
I3563      12 36.1   +27  56  d  Con                N  inv  in  4559
I3569   Gx 12 36.1   +19  19  t  Com    1.3   13.  p cS,  spir,  2  br,  F*  N,  F*  inv;  = 4561
I3558      12 36.2   +11  51  d  Vir                D;  F,  R,  dist  12"  n  &  s
I3562   Gx 12 36.2   +09  55  z  Vir          16.  p E 220deg
I3564      12 36.2   +27  56  d  Con                N  inv  in  4559
I3565   Gx 12 36.2   +26  45  x  Con                vF,  S,  E 148deg  ;  st?
 4565   Gx 12 36.3   +25  59  s  Com   16.2    9.6   B,  eL,  eE  135deg  ,  vsbMN  =  *10-11
I3566    ? 12 36.3   +11  09  x  Vir                com,  R  with  tail  1'  at  110deg
I3570      12 36.3   +24  05  d  Com                eF,  S,  iF,  *13  np
I3571   Gx 12 36.3   +26  05  x  Con                eF,  S,  iF,  others  nr
 4564   Gx 12 36.4   +11  26  s  Vir    3.1   11.1   pB,  S,  lE,  psbM
I3567   Gx 12 36.4   +13  36  z  Con          15.  p F,  vS,  R,  bM
 4567   Gx 12 36.5   +11  15  s  Vir    3.0   11.3   vF,  L,  np  of  Dneb  (4568  at  160deg  +/-  )
I3572    * 12 36.5   +11  37  x  Vir                eF,  vS,  ??
I3573      12 36.5   +11  46  d  Vir                F,  vS,  R
I3574      12 36.5   +12  24  d  Vir                vF,  vS;  *14?
I3575      12 36.5   +13  45  d  Con                vF,  vS,  R
I3579    * 12 36.5   +26  06  x  Con                eF,  S,  iF,  others  nr
I3582   Gx 12 36.5   +26  12  v  Con    0.5          F,  vS,  com,  bM,  others  nr
 4568   Gx 12 36.6   +11  14  s  Vir    4.6   10.8   vF,  L,  sf  of  Dneb
I3576   Gx 12 36.6   +06  37  s  Vir    3.0   14.  p F,  pS,  dif
I3577   D* 12 36.6   +11  54  x  Vir                vF,  pS,  dif,  *13  inv  nf
I3578   Gx 12 36.6   +11  06  u  Vir    1.0   15.  p S,  E 125deg
I3580      12 36.6   +18  17  d  Con                F,  vS,  R
I3581   Gx 12 36.6   +24  24  m  Con    0.4   15.  p pB,  S,  E 50deg  ,  bM
I3583   Gx 12 36.7   +13  15  s  Vir    2.2   14.  p vmE,  *13  att  sf,  2  st  12  nr
I3585   Gx 12 36.7   +26  50  v  Con    1.4                cF,  S,  neb*
 4569   Gx 12 36.8   +13  10  s  Vir    9.5    9.5   pL,  bMN;  = M90
I3584    * 12 36.8   +12  14  x  Vir                vF,  vS;  *14?
I3587   Gx 12 36.8   +27  33  u  Con    1.5   16.  p vF,  S,  lE  120deg  ,  *15  nf
 4570   Gx 12 36.9   +07  15  s  Vir    4.1   10.9   cB,  pS,  mE  0deg  +/-  ,  sbMrN
 4571   Gx 12 36.9   +14  13  s  Con    3.8   11.3   vF,  L,  E,  vgbM,  *9  nf  nr;  = IC  3588
I3586   Gx 12 36.9   +12  32  m  Vir    0.6   15.  p vF,  cS,  dif
I3588    ? 12 36.9   +14  13  x  Con                cF,  pL,  lbM
I3590      12 36.9   +27  17  d  Com                vF,  S,  viF
I3592   Gx 12 36.9   +27  53  u  Con    1.3   15.  p pF,  S,  lE  140deg
I3594    * 12 36.9   +26  07  x  Con                eF,  vS,  iF
I3589      12 37.0   +06  56  d  Vir                vF,  S,  R,  stell
I3591      12 37.0   +06  56  d  Vir                F,  pS,  nr  *14
I3593   Gx 12 37.0   +27  46  m  Con    0.4   15.  p pF,  S,  iF,  N
I3595      12 37.1   +23  47  d  Con                eF,  S,  iF
I3596   D* 12 37.3   +26  31  x  Con                vF,  S,  iF,  nr  D*
 4589   Gx 12 37.4   +74  12  s  Dra    3.0   12.  p cB,  L,  lE,  pgmbM
I3597      12 37.4   +23  52  d  Con                eF,  S,  R
I3598   Gx 12 37.4   +28  12  v  Con    1.7                pF,  vS,  sbM  *,  *15  nf  100"
 4577    - 12 37.5   +06  04  r  Vir                vF,  vS;  = 4543?
 4578   Gx 12 37.5   +09  33  s  Vir    3.6   11.4   pF,  pS,  R,  sbMN,  * np
 4576   Gx 12 37.6   +04  22  s  Vir    1.4   13.5   F,  *7  sf
I3600   Gx 12 37.6   +27  08  v  Com    0.6          F,  vS,  neb*
 4573   Gx 12 37.7   -43  37  r  Cen                vF,  S,  *10  n  30"
 4574   Gx 12 37.7   -35  30  r  Cen                vF,  L,  lE,  vglbM
 4579   Gx 12 37.7   +11  49  s  Vir    5.4    9.8   B,  L,  iR,  vmbM,  r;  = M58
I3599   Gx 12 37.7   +26  42  v  Con                cF,  S,  R,  bM
 4580   Gx 12 37.8   +05  22  s  Vir    2.4   13.  p pB,  L,  vgbM
I3601   PD 12 37.8   +15  12  x  Com                bM,  mag  15
 4575   Gx 12 37.9   -40  32  s  Cen    2.2   13.  p F,  S,  pmE,  2  st  p
 4583   Gx 12 38.0   +33  28  r  CVn          14.  p cF,  S,  lE,  bM
 4585   Gx 12 38.1   +28  57  r  Com          14.  p vF,  eS
I3602   Gx 12 38.1   +10  05  z  Vir          15.  p F,  eS,  R,  lbM
 4581   Gx 12 38.2   +01  28  r  Vir          13.  p F,  S,  bM,  stell  N
 4582    * 12 38.2   +00  11  F  Vir                *12  in  F  neb
I3603      12 38.2   +15  32  d  Con                eF,  bM,  mag  15
 4584   Gx 12 38.3   +13  07  s  Vir    1.5   14.  p vF,  S,  R
I3605      12 38.3   +19  31  d  Con                vF,  vS,  R
I3604      12 38.4   +11  43  d  Vir                F,  vS,  R,  lbM
I3606      12 38.4   +12  36  d  Vir                F,  vlE
 4586   Gx 12 38.5   +04  19  s  Vir    4.4   11.6   pB,  L,  E,  psbM
I3607    ? 12 38.5   +10  22  x  Vir                F,  eS,  R
I3609   Gx 12 38.5   +14  22  z  Con          15.  p B,  vS,  R;  PN  ?
 4587   Gx 12 38.6   +02  40  r  Vir          14.  p F,  pS,  mbM
I3608   Gx 12 38.6   +10  29  u  Vir    3.5   15.  p vS,  R,  wisps  pf,  1'  each
 4588   Gx 12 38.8   +06  46  r  Vir          15.  p vF,  eS
I3610      12 38.8   +26  52  d  Con                eF,  S,  viF
I3614      12 39.0   +26  18  d  Con                eF,  pS,  gbM,  spir
I3615   Gx 12 39.0   +18  11  u  Com    1.3   15.  p S,  E 185deg  ,  bN
I3611   Gx 12 39.1   +13  22  x  Con                pF,  cS,  E 130deg
I3612      12 39.1   +14  43  d  Con                B,  vS,  R;  PN  ?
I3613      12 39.1   +13  44  d  Con                F,  eS,  R,  lbM
I3616    ? 12 39.2   +14  44  x  Con                bM,  mag  14
I3618   Gx 12 39.2   +26  41  v  Con                F,  vS,  R,  bM
 4591   Gx 12 39.3   +06  01  r  Vir          14.  p vF,  cS
 4592   Gx 12 39.3   -00  32  s  Vir    4.6   12.  p F,  L,  E  90deg  +/-  ,  vgbM
I3619      12 39.3   +24  08  d  Com                vF,  cS,  E  160deg  ,  bM
I3620   Gx 12 39.3   +27  55  v  Con                F,  S,  iF,  bM,  sev  neb  st  nr
I3617   Gx 12 39.4   +07  58  s  Vir    1.1   15.  p vF,  S
I3623   Gx 12 39.4   +27  07  v  Con                cF,  S,  R,  bM
 4590   Gb 12 39.5   -26  45  s  Hya   12.0    8.2   glob.  cl.  ,  L,  eRi,  vC,  iR,  rrr,  st  12;  =
    M68
I3621      12 39.5   +15  29  d  Com                bM,  mag  14
I3622      12 39.5   +15  25  d  Con                vF,  S,  R
I3626   Gx 12 39.5   +25  41  z  Con          16.  p vF,  S,  bM,  spir
I3627      12 39.5   +27  30  d  Con                F,  S,  iF,  N
I 803   Gx 12 39.6   +16  36  m  Com    0.7   15.  p eF,  S,  v  diffic
I3624      12 39.6   +11  59  d  Vir                F,  S,  E  180deg
 4593   Gx 12 39.7   -05  21  s  Vir    4.0   12.  p pB,  cL,  E,  sbMN  =  *
I3625      12 39.7   +10  58  d  Vir                vF,  R
I3628      12 39.7   +26  15  d  Con                eF,  S,  R
I3629      12 39.8   +13  31  d  Con                S,  mE  245deg  ,  lbM
I3630      12 39.8   +25  26  d  Con                vF,  vS,  lE;  D*?
I3631   Gx 12 39.8   +12  59  x  Vir          14.  p bM,  mag  13
 4595   Gx 12 39.9   +15  18  s  Com    1.8   13.  p pF,  pL,  R,  gbM
 4596   Gx 12 39.9   +10  11  s  Vir    3.9   10.5   B,  pS,  R,  gmbM,  r,  3  st  f
 4594   Gx 12 40.0   -11  37  s  Vir    8.9    8.3   !,  vB,  vL,  eE  92deg  ,  vsmbMN;  = M104
 4605   Gx 12 40.0   +61  37  s  UMa    5.5   11.  p B,  L,  vmE  118deg  ,  glbM
I3632      12 40.0   +26  41  d  Con                eF,  cS,  iF
 4597   Gx 12 40.2   -05  48  s  Vir    3.6   12.  p F,  vL,  bM
I3633   Gx 12 40.2   +09  53  z  Vir          15.  p vS,  PN  ,  lbM
I3634      12 40.2   +09  50  d  Vir                vF,  R,  dif
I3635   Gx 12 40.2   +12  53  u  Vir    1.2   15.  p F,  vS,  R,  bM
I3636      12 40.2   +22  04  d  Con                eF,  vS,  E  0deg  ,  bM
 4598   Gx 12 40.3   +08  23  r  Vir          14.  p eF,  L,  R,  vlbM
I3637   Gx 12 40.3   +14  43  z  Con          16.  p vF,  vS,  R,  dif
I3638   Gx 12 40.3   +10  31  m  Vir    0.6   15.  p B,  S,  R,  lbM
 4600   Gx 12 40.4   +03  08  r  Vir          13.  p F,  S,  R,  2  st  8  f
I3640      12 40.4   +26  31  d  Con                vF,  R  neb  30"  np  IC  3641
I3641      12 40.4   +26  31  d  Con                F,  S,  bM,  spir
I3642      12 40.4   +26  44  d  Con                vF,  cS,  iF,  dif
 4599   Gx 12 40.5   +01  11  r  Vir          13.  p vF,  vS
I3645   Gx 12 40.5   +26  32  v  Com    0.7          F,  vS,  R,  bM
I3646   Gx 12 40.5   +26  31  v  Com    1.3          F,  S,  E  65deg  ,  bM
 4602   Gx 12 40.6   -05  08  s  Vir    3.6   12.  p F,  L,  E,  vglbM
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I3644      12 40.6   +26  30  d  Com                vF,  S,  iF
 4604    - 12 40.7   -05  09  r  Vir                no  description
I3643      12 40.7   +12  24  d  Vir                F,  vlE
I3650   Gx 12 40.7   +26  30  m  Com    0.8   15.  p eF,  vS,  bM,  spir
 4601   Gx 12 40.8   -40  54  v  Cen    2.2         eF,  L,  R,  pslbM,  p  of  2
I3649      12 40.8   +21  06  d  Com                F,  vS,  iF,  N
I3651   Gx 12 40.8   +26  44  v  Com    1.3         pF,  cS,  R,  spir
 4603   Gx 12 40.9   -40  59  s  Cen    3.8   12.  p F,  L,  R,  vgbM,  r
I3639   Gx 12 40.9   -36  45  c  Cen    1.4         pF,  pS,  *12.5  ssp
I3647    ? 12 40.9   +10  28  x  Vir                F,  cS,  mE  135deg
I3648    ? 12 40.9   +12  59  x  Vir                eF,  S;  ??
 4606   Gx 12 41.0   +11  55  s  Vir    2.8   11.9   vF,  pS,  E,  2  or  3  vS  st  inv
I3652   Gx 12 41.0   +11  11  u  Vir    1.0   15.  p S,  R,  mbM
 4617   Gx 12 41.1   +50  26  s  CVn    3.1   14.  p pF,  S,  iR,  er
 4607   Gx 12 41.2   +11  53  s  Vir    3.2   12.9   F,  mE,  3'  or  4'  f  4606
 4608   Gx 12 41.2   +10  09  s  Vir    3.2   11.1   pB,  pL,  R,  psbM,  r,  *12  np  1'
I3653   Gx 12 41.2   +11  24  x  Vir                15.  p bM,  mag  13
I3654      12 41.2   +22  35  d  Com                F,  S,  iF,  N
I3655      12 41.2   +20  40  d  Com                vF,  vS,  iF,  *16  inv,  other  neb  nr
I3656      12 41.2   +22  36  d  Com                F,  S,  iF,  N
I 804   Gx 12 41.3   -05  01  x  Vir                vF,  vS,  R
I 805      12 41.3   +13  44  x  Com                vF,  pL,  R,  2  st  n  &  nf;  =  4611
I3657      12 41.3   +21  41  d  Com                vF,  vS,  N;  neb*?
I3658   Gx 12 41.3   +14  42  z  Com                15.  p F,  S,  E  240deg
 4610    - 12 41.4   +07  43  r  Vir                F,  vL;  =  4470?
 4613   Gx 12 41.4   +26  05  r  Com                15.  p vF,  S,  lE,  1st  of  3
 4614   Gx 12 41.4   +26  02  r  Com                14.  p F,  S,  R,  *12  np,  2nd  of  3
 4611   Gx 12 41.5   +13  44  r  Com                15.  p eF,  S,  lE,  bet  2  vF  st;  =  IC  805
 4612   Gx 12 41.5   +07  19  s  Vir    2.2   13.  p pB,  S,  R,  psmbM
 4615   Gx 12 41.5   +26  04  r  Com                14.  p F,  pL,  E,  3rd  of  3
 4618   Gx 12 41.5   +41  09  s  CVn    4.4   10.8   B,  L,  E,  mbM,  curved  branch  n
I3659      12 41.5   +22  56  d  Com                cF,  S,  E  50deg
I3667      12 41.5   +41  09  d  CVn                cB,  pL,  E  55deg  ,  bM
I3668      12 41.5   +41  08  d  CVn                pF,  pS,  iF,  N
I3660      12 41.6   +21  06  d  Com                F,  vS,  iF,  N
I3661      12 41.6   +22  30  d  Com                cF,  S,  iF,  N
I3662   Gx 12 41.6   +23  25  m  Com    0.6   15.  p F,  S,  R,  bM,  spir
I3669      12 41.6   +41  08  d  CVn                F,  pS,  iF,  N
 4619   Gx 12 41.7   +35  04  s  CVn    1.5   14.  p F,  pS,  R,  lbM,  *8·9  f
I3663      12 41.7   +12  14  d  Vir                F,  S,  R,  dif
I3664      12 41.7   +19  57  d  Com                vF,  vS,  iF,  N
 4648   Gx 12 41.8   +74  25  s  Dra    2.2   13.  p pB,  cS,  R,  gbM,  **  p
I3665   Gx 12 41.8   +11  30  u  Vir    1.0   15.  p F,  S,  R,  dif
I3671   Gx 12 41.8   +23  31  m  Com    0.5   15.  p cF,  cS,  lE  230deg  ,  bM
 4625   Gx 12 41.9   +41  16  s  CVn    2.4   12.3   pF,  S,  R
I 808   OC 12 41.9   +19  57  x  Com                S  nebs  Cl
I3666      12 41.9   +07  51  d  Vir                eF,  vS,  ?
I3670      12 41.9   +11  45  d  Vir                vS,  R,  bM
I3675   Gx 12 41.9   +41  17  t  CVn    2.0   13.  p pB,  pL,  iF,  N;  =  4625
 4620   Gx 12 42.0   +12  57  s  Vir    2.0   13.  p vF,  S,  R,  vgbM
 4621   Gx 12 42.0   +11  39  s  Vir    5.1    9.8   B,  pL,  lE,  vsvmbM,  2  st  p;  =  M59
 4627   Gx 12 42.0   +32  34  s  CVn    2.7   12.3   F,  S,  R,  np  of  2
I3680      12 42.0   +39  06  d  CVn                F,  S,  iF,  N
I3681      12 42.0   +39  05  d  CVn                cF,  vS,  E  135deg  ,  bM,  *13  sp
 4631   Gx 12 42.1   +32  32  s  CVn   15.1    9.3   !,  vB,  vL,  eE  70deg  +/-  ,  bMN,  *12  att  n
I 809   Gx 12 42.1   +11  45  u  Vir    1.1   15.  p eF,  pS,  R,  M59  s
I 810   Gx 12 42.1   +12  36  u  Vir    1.7   15.  p eF,  pS,  mE
I3672   Gx 12 42.1   +11  45  x  Vir                vF,  vS,  R,  stell;  IC  809  n
I3673      12 42.1   +21  08  d  Com                F,  vS,  iF,  N
I3674      12 42.1   +22  31  d  Com                pF,  S,  exc  N,  *11  sp
I3687   Gx 12 42.1   +38  30  s  CVn    3.5   13.  p vF,  cL,  dif,  sev  N
 4623   Gx 12 42.2   +07  41  s  Vir    2.6   13.  p cF,  pL,  E,  pslbM,  r
I 806   Gx 12 42.2   -17  20  m  Crv    0.6   15.  p eF,  eS,  R,  *12  close
I3676    * 12 42.2   +13  33  x  Com                vF,  vS;  *13?
I3677      12 42.2   +20  53  d  Com                F,  vS,  iF,  N
I3678      12 42.2   +20  53  d  Com                vF,  vS,  iF,  N
I3679      12 42.2   +22  49  d  Com                F,  S,  iF,  N
 4609   OC 12 42.3   -62  58  s  Cru    5.     6.9   Cl,  pL,  pC,  cE,  st  10
 4616   Gx 12 42.3   -40  39  s  Cen    1.6         eF,  vS,  R,  *  att  nf,  p  of  2
 4624    - 12 42.3   +03  04  r  Vir                B,  E;  =  4636?
I 807   Gx 12 42.3   -17  22  m  Crv    0.3   15.  p pF,  vS,  R,  gbM
I3682      12 42.3   +20  52  d  Com                F,  vS,  iF,  N
I3683      12 42.3   +20  52  d  Com                F,  vS,  iF,  N
 4626   Gx 12 42.4   -07  02  r  Vir                14.  p vF,  cS,  lE,  glbM
 4628   Gx 12 42.4   -06  57  r  Vir                14.  p cF,  S,  E,  gbM
I3684      12 42.4   +11  43  d  Vir                vF,  vS,  R
 4630   Gx 12 42.5   +03  58  s  Vir    1.7   13.  p cF,  S,  R,  lbM
 4632   Gx 12 42.5   -00  05  s  Vir    3.2   12.  p pB,  L,  E  45deg  +/-
I3685      12 42.5   +06  52  d  Vir                vF,  pL
 4622   Gx 12 42.6   -40  45  s  Cen    2.1         pF,  S,  R,  pslbM,  f  of  2
 4629   D* 12 42.6   -01  21  F  Vir                pB,  pL,  E,  lbM;  biN?
 4633   Gx 12 42.6   +14  21  s  Com    2.1   13.2   eeF,  pS,  F*  close  p,  4634  s;  =  IC  3688
 4635   Gx 12 42.6   +19  57  s  Com    2.0   13.  p vF,  L,  vglbM
I3686   Gx 12 42.6   +10  34  m  Vir    1.5   16.  p F,  S,  R
I3688      12 42.6   +14  22  x  Com                cF,  pS;  =  4633
I3689      12 42.6   +20  51  d  Com                F,  vS,  iF,  N
 4634   Gx 12 42.7   +14  18  s  Com    2.4   12.4   vF,  L,  mE  135deg  +/-  ,  vgbM
 4644   Gx 12 42.7   +55  09  s  UMa    1.8   14.0   vF,  S,  R,  gbM
 4636   Gx 12 42.8   +02  41  s  Vir    6.2    9.6   B,  L,  iR,  vgvmbM,  r
 4638   Gx 12 42.8   +11  26  s  Vir    2.8   11.3   F,  R,  gbM
I3690   Gx 12 42.8   +10  22  u  Vir    1.3   15.  p B,  vS,  R
I3691      12 42.8   +22  47  d  Com                F,  S,  iF,  N
 4637   Gx 12 42.9   +11  26  s  Vir    1.5   15.  p cB,  S,  like  a  *10;  makes  a  Dneb  with  4638?
 4639   Gx 12 42.9   +13  15  s  Vir    2.9   11.5   pB,  S,  E,  r,  *12  sf  1'
 4646   Gx 12 42.9   +54  51  s  UMa    0.7   14.  p F,  S,  4  vS  st  sp
I3692   Gx 12 42.9   +21  00  u  Com    1.0   15.  p pF,  S,  bM,  spir
I3693      12 43.0   +10  40  d  Vir                F,  vS,  R,  lbM
I3697   Gx 12 43.0   +39  50  m  CVn    0.7   17.  p vF,  S,  N;  neb*?
 4640   Gx 12 43.1   +12  18  r  Vir                15.  p eF,  pL,  lE,  *  nr  p
I3694   Gx 12 43.1   +11  13  m  Vir    0.7   15.  p bM,  mag  13.5
I3695      12 43.1   +22  45  d  Com                vF,  vS,  iF,  N
 4641   Gx 12 43.2   +11  03  r  Vir                15.  p eF,  pL,  R,  F*  nr  f
I3696      12 43.2   +19  56  d  Com                vF,  vS,  iF,  N
 4642   Gx 12 43.3   -00  39  s  Vir    2.0   14.  p vF,  cS,  E
 4643   Gx 12 43.3   +01  59  s  Vir    3.4   10.6   cB,  pS,  lE,  mbM
 4652   Gx 12 43.3   +58  58  r  UMa                15.  p pF,  pL,  gbM,  2  B  st  6'  np
I3698   Gx 12 43.3   +11  13  m  Vir    0.5   15.  p S,  R,  mbM
I3699      12 43.3   +19  00  d  Com                F,  S,  iF,  N,  3  st  n,  np
I3700      12 43.3   +19  16  d  Com                F,  S,  dif
I3703      12 43.4   +37  59  d  CVn                F,  vS,  iF,  N,  2  st  11  sf
 4647   Gx 12 43.5   +11  35  s  Vir    3.0   11.4   pF,  pL,  lE  115deg  +/-  ,  np  of  Dneb
I3701      12 43.5   +11  02  d  Vir                F,  vS,  R,  dif
I3702   Gx 12 43.5   +10  53  z  Vir                15.  p B,  vS,  R
I3707      12 43.5   +37  59  d  CVn                pF,  vS,  bM*
 4655   Gx 12 43.6   +41  02  r  CVn                15.  p vF,  vS,  stellar,  *15  f
 4649   Gx 12 43.7   +11  33  s  Vir    7.2    8.8   vB,  pL,  R,  f  of  Dneb;  =  M60
 4651   Gx 12 43.7   +16  24  s  Com    3.8   10.7   cB,  L,  E  90deg  ,  gbM,  r
I3704   Gx 12 43.7   +10  47  u  Vir    1.3   15.  p F,  pL,  mE  225deg
I3705      12 43.7   +19  20  d  Com                eF,  S,  iF
I3706    * 12 43.8   +09  14  x  Vir                vF,  cS,  dif
 4653   Gx 12 43.9   -00  34  s  Vir    2.6   12.3   vF,  pL
I3708      12 43.9   +13  08  x  Vir                pB,  cL,  E;  =  4654
 4654   Gx 12 44.0   +13  08  s  Vir    4.7   10.5   F,  vL,  pmE  (D?),  3  st  nr;  =  IC  3708
 4656   Gx 12 44.0   +32  10  s  CVn   13.8   10.4   !,  pB,  L,  vmE  34deg  ,  sp  of  2
I3709   Gx 12 44.0   +09  04  z  Vir                15.  p vF,  cS,  dif
I3710   Gx 12 44.1   +12  08  x  Vir                vF,  cS,  R,  dif
I3713   Gx 12 44.1   +41  10  m  CVn    0.6   15.  p F,  pS,  dif,  *13  sf  1'
 4645   Gx 12 44.2   -41  45  s  Cen    2.2   13.  p pB,  S,  psbM
 4657   Gx 12 44.2   +32  12  v  CVn    1.2         !,  pF,  L,  E  90deg  +/-  ,  nf  of  2
I3711      12 44.2   +11  10  d  Vir                vF,  vS,  R,  dif
 4650   Gx 12 44.3   -40  44  s  Cen                vF,  R,  bM,  r

I3712    ? 12 44.3   +10  22  x  Vir                vF,  pS,  E  42deg  ;  ?
I3714   Gx 12 44.4   +10  11  m  Vir    0.8   16.  p S,  R
I3715      12 44.4   +19  51  d  Com                vF,  vS,  iF,  N
I3717   Gx 12 44.4   +39  30  m  CVn    0.6   16.  p F,  cS,  E  150deg  ,  bM,  *15  np
 4659   Gx 12 44.5   +13  31  s  Com    1.8   13.  p F,  cS,  R,  bM,  r
 4660   Gx 12 44.5   +11  11  s  Vir    2.8   11.0   vB,  S,  vsvmbMN
 4662   Gx 12 44.5   +37  07  s  CVn    2.5   14.  p pF,  pL,  R,  gbM,  r
I3723   Gx 12 44.5   +40  44  v  CVn    0.4         pF,  vS,  R,  bM
 4658   Gx 12 44.6   -10  05  s  Vir    2.2   13.  p vF,  L,  E,  *16  att,  *9  p
I3726   Gx 12 44.7   +40  42  u  CVn    1.7   16.  p F,  cS,  E  145deg  ,  bM
 4663   Gx 12 44.8   -10  12  s  Vir    1.4   14.  p vF,  S,  *13·14  f;  =  IC  811
 4669   Gx 12 44.8   +54  53  s  UMa    1.7   15.  p F,  E;  r?
I 811      12 44.8   -10  12  x  Vir                nebs  *13,  sf  4658;  =  4663
I3716      12 44.8   +08  06  d  Vir                vF,  vS,  sp  of  2
I3718   Gx 12 44.8   +12  21  v  Vir    3.0         F,  pS,  E  90deg
I3719      12 44.8   +08  06  d  Vir                eF,  vS,  ??,  nf  of  2
I3720   Gx 12 44.8   +12  04  v  Vir    2.8         eF,  S,  dif
I3721      12 44.8   +18  45  d  Com                bM,  mag  13.5
I 812      12 44.9   -04  26  d  Vir                pB,  S,  R,  N  =  13m
I3722    * 12 44.9   +11  47  x  Vir                vF,  vS,  =  *13
I3724   Gx 12 44.9   +10  17  z  Vir                16.  p S,  R
I3725      12 44.9   +18  45  x  Com                pF,  cS,  E,  bM;  =  IC  3721
I3729   Gx 12 44.9   +39  20  m  CVn    0.2   16.  p F,  vS,  iF,  N,  neb  st  np
 4664      12 45.1   +03  03  A  Vir                pB,  2  S  st  in  N,  S*  p;  =  4665
 4665   Gx 12 45.1   +03  03  s  Vir    4.2   12.  p B,  pL,  iR,  mbM,  *10  sp
 4666   Gx 12 45.1   -00  28  s  Vir    4.5   10.8   B,  vL,  mE  45deg  +/-  ,  psbM
I3727   Gx 12 45.1   +10  54  u  Vir    1.6   16.  p F,  S,  R,  lbM
I3728      12 45.1   +20  58  d  Com                vF,  vS,  iF,  N
I3730   Gx 12 45.1   +21  11  v  Com    0.4   14.6   pB,  vS,  R,  bM,  in  dif  neb
 4661   Gx 12 45.2   -40  49  c  Cen    1.1         F,  pL,  R,  gbM
I 813   Gx 12 45.2   +23  03  u  Com    1.1   14.  p F,  pS,  iR,  bM
I3731      12 45.2   +12  25  d  Vir                bM,  mag  14.5
I3732      12 45.2   +10  18  d  Vir                vS,  R
I3734      12 45.2   +23  02  d  Com                *15  in  dif  neb;  IC  813  f  0'.5
 4667    - 12 45.3   +11  26  r  Vir                B,  S,  R,  psbM;  nonexistent?
 4670   Gx 12 45.3   +27  08  s  Com    1.8   12.7   pF,  cS,  R,  bM,  r,  p  of  2
I3733      12 45.3   +06  58  d  Vir                eF,  S,  =  *14
I3735   Gx 12 45.3   +13  42  m  Com    0.4   15.  p F,  S,  R
I3736   Gx 12 45.3   +21  31  m  Com    0.5   16.  p pF,  vS,  E  155deg  ,  bM
I3737      12 45.3   +21  58  d  Com                F,  vS,  iF,  N
I3738      12 45.4   +19  14  d  Com                neb  *15
 4668   Gx 12 45.5   -00  32  s  Vir    1.4   13.1   vF,  S,  iF
I3739    ? 12 45.5   +13  00  x  Vir                cF,  cS,  biN
I3740   Gx 12 45.5   +20  49  z  Com                16.  p pF,  cS,  E  0deg  ,  bM
I3742   Gx 12 45.5   +13  20  v  Com    1.9         pL,  mE  225deg  ,  bM
 4673   Gx 12 45.6   +27  04  s  Com    1.2   14.  p F,  vS,  R,  sbM  *10,  f  of  2
 4675   Gx 12 45.6   +54  44  s  UMa    1.6   15.  p cF,  S,  lE
I 814      12 45.6   -08  06  d  Vir                pB,  vS,  R,  r
I3741      12 45.6   +19  12  d  Com                neb  *16
I3745   Gx 12 45.6   +19  10  m  Com    0.3   15.  p pF,  vS,  R,  bM
I3746   Gx 12 45.6   +37  49  z  CVn                16.  p F,  S,  iF,  N
I3747      12 45.6   +37  58  d  CVn                F,  vS,  iF,  N
I3751   Gx 12 45.6   +37  49  z  CVn                16.  p F,  vS,  iF,  N,  neb  *15  p
I3743    * 12 45.7   +11  06  x  Vir                vF,  S
I3744      12 45.7   +19  30  d  Com                F,  vS,  iF,  N
 4671   Gx 12 45.8   -07  04  r  Vir                14.  p pF,  S,  R,  psmbM
I3748      12 45.8   +19  26  d  Com                vF,  vS,  iF,  N
I3749      12 45.9   +19  32  d  Com                vF,  eS,  bM,  spir
I3758   Gx 12 45.9   +40  47  z  CVn                15.  p pF,  S,  neb*
I3750      12 46.0   +19  06  d  Com                eF,  eS,  iF,  N
I3757      12 46.0   +38  31  d  CVn                pF,  S,  iF,  *13  inv
 4674   Gx 12 46.1   -08  39  s  Vir    1.9   15.  p vF,  cS,  R,  glbM
 4676   Gx 12 46.1   +30  44  s  Com    2.8   14.  p vF,  pmE;  biN?
I3752      12 46.1   +19  01  d  Com                vF,  vS,  iF,  neb  *14  np  1',  *10  np  1'.5
I3753      12 46.1   +19  07  d  Com                eF,  S,  E,  *14  conn  p
I3755      12 46.1   +19  09  d  Com                F,  vS,  iF,  N
I3754   Gx 12 46.2   +08  21  u  Vir    1.4   15.  p F,  S
 4672   Gx 12 46.3   -41  43  v  Cen    1.9         eF,  S,  R,  vgbM
I3756   Gx 12 46.3   +11  53  m  Vir    0.3   15.  p bM,  mag  15
I3759      12 46.3   +20  47  d  Com                vF,  vS,  iF,  N,  *15  sf  20"
I 815   Gx 12 46.4   +11  53  m  Vir    0.4   15.  p F,  vS,  *14  inv
I3760      12 46.4   +11  52  x  Vir                bM,  mag  14;  =  IC  815
I3761      12 46.5   +20  17  d  Com                vF,  vS,  R,  bM,  *12  sp
I 818   Gx 12 46.6   +29  44  v  Com    1.3         vS,  R,  bM,  *12  nf  2'.5
I3762      12 46.6   +22  15  d  Com                vF,  S,  iF,  in  gr  of  neb
I3765      12 46.6   +38  34  d  CVn                vF,  S,  iF,  N
 4678    - 12 46.7   -04  35  r  Vir                eF,  eS,  R  (neb?),  *  2s  f
 4686   Gx 12 46.7   +54  33  s  UMa    2.3   14.  p pF,  vS,  vmE,  vsmbM
I 816   Gx 12 46.7   +09  51  u  Vir    1.0   15.  p eeF,  vS,  R,  D*  nf,  np  of  2
I3768      12 46.7   +40  36  d  CVn                vF,  S,  iF,  N
I3763      12 46.8   +21  59  d  Com                F,  S,  iF
I3769      12 46.8   +40  28  d  CVn                F,  vS,  iF,  N
 4680   Gx 12 46.9   -11  37  r  Vir                13.  p eF,  S,  1  or  2  st  inv
I 817   Gx 12 46.9   +09  52  m  Vir    0.3   15.  p eeF,  vS,  R,  sf  of  2
I3766      12 46.9   +19  07  d  Com                vF,  vS,  R,  bM
I3771      12 46.9   +39  10  d  CVn                vF,  S,  dif
I3774   Gx 12 46.9   +36  17  u  CVn    1.1   16.  p F,  cS,  iF,  N
 4677   Gx 12 47.0   -41  35  s  Cen    2.9   12.7   eF,  lE,  vgbM
I3764      12 47.0   +09  51  x  Vir                vF,  cS;  =  IC  816
I3767      12 47.0   +10  10  d  Vir                vF,  bM,  mag  16
I3778   Gx 12 47.0   +40  37  z  CVn                16.  p pF,  S,  R,  bM
 4685   Gx 12 47.1   +19  28  r  Com                14.  p F,  S,  R,  sbM*,  rr
 4693   Gx 12 47.1   +71  12  r  Dra                14.  p vF,  plE
I3772   Gx 12 47.1   +36  34  m  CVn    0.6   16.  p pF,  cS,  iF,  N
I3780      12 47.1   +40  14  d  CVn                F,  vS,  bM,  spir
I 819      12 47.2   +30  44  d  Com                vF,  vS,  np  &  conn  with  IC  820
I 820      12 47.2   +30  43  x  Com                Dneb  with  IC  819  and  brighter;  =  4676
I3773   Gx 12 47.2   +10  13  u  Vir    2.1   14.  p vF,  S,  bM
I3776      12 47.2   +22  29  d  Com                F,  S,  iF
 4682   Gx 12 47.3   -10  04  s  Vir    2.8   13.  p cF,  L,  E  45deg  +/-  ,  gvlbM
 4684   Gx 12 47.3   -02  43  s  Vir    2.9   13.  p B,  pL,  pmE  25deg
I3770      12 47.3   +09  12  d  Vir                cF,  cS,  E  30deg  ;  ?
I3775      12 47.3   +11  44  d  Vir                vF,  bM,  mag  16
I3779   Gx 12 47.3   +12  10  z  Vir                15.  p bM,  mag  15
I3782      12 47.3   +40  23  d  CVn                F,  vS,  R,  bM
 4687   Gx 12 47.4   +35  21  s  CVn    1.2   14.  p vF,  vS,  R,  psbM
I 821   Gx 12 47.4   +29  48  v  Com    1.4         R,  pL,  glbM,  2  st  ssf
I3777      12 47.4   +09  09  d  Vir                F,  S
I3781      12 47.4   +22  34  d  Com                vF,  pS,  iF,  2  st  n  and  p
I3783   Gx 12 47.4   +40  34  m  CVn    0.6   14.  p pF,  S,  iF,  N
 4679   Gx 12 47.5   -39  34  s  Cen    2.3   13.  p eeF,  pL,  R
 4681   Gx 12 47.5   -43  20  r  Cen                pF,  S,  R,  gbM
 4695   Gx 12 47.5   +54  23  s  UMa    1.3   15.  p eF,  pS,  vlE,  mbMN
I3791      12 47.5   +54  27  d  UMa                eeF,  S,  cE
I3786      12 47.6   +39  03  d  CVn                vF,  S,  iF,  p  dif
 4683   Gx 12 47.7   -41  32  s  Cen    2.1   12.9   eF,  pS,  R,  vgbM,  S*  sp
I3787      12 47.7   +40  37  d  CVn                F,  vS,  iF,  N
 4688   Gx 12 47.8   +04  20  s  Vir    3.3   13.  p eF,  pL,  *9·10  p  10s
 4689   Gx 12 47.8   +13  46  s  Com    4.0   10.9   pB,  vL,  E,  vglbM,  r
I 822   Gx 12 47.8   +30  05  m  Com    0.4   16.  p F,  eS,  bM
I 823    ? 12 47.8   +27  12  x  Com                susp,  2'  s  of  4692
 4690   Gx 12 47.9   -01  38  r  Vir                14.  p vF,  S
 4692   Gx 12 47.9   +27  13  s  Com    1.4   14.  p F,  cS,  R,  bM;  =  IC  823
I3784      12 47.9   +19  23  d  Com                F,  vS,  E  70deg  ,  bM
I3785      12 47.9   +19  17  d  Com                vF,  vS,  iF,  N
I3788   Gx 12 48.1   +18  52  m  Com    0.5   17.  p F,  S,  R,  *7  sp  2'
I3789      12 48.1   +20  12  d  Com                F,  cS,  bM,  spir,  *13  sp  0'.5
I3795   Gx 12 48.1   +40  43  m  CVn    0.5   16.  p F,  S,  iF,  N
 4691   Gx 12 48.2   -03  20  s  Vir    3.2   11.2   pB,  pL,  E  90deg  +/-  ,  mbM
 4694   Gx 12 48.2   +10  59  s  Vir    3.6   12.  p pF,  S,  vlE
I3790    * 12 48.2   +11  07  x  Vir                eF,  vS,  ??
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I3793      12 48.2   +19  09  d  Com                 vF,  vS,  iF,  N
I3792    ?  12 48.3   +11  05  x  Vir                 vF,  S
 4698    Gx 12 48.4   +08  29  s  Vir    4.3   10.7   cB,  pL,  iR,  bM,  r
 4707    Gx 12 48.4   +51  10  s  CVn    2.3   14.  p S,  stellar
I3794      12 48.4   +19  10  d  Com                 F,  spir,  sbM  *
I3796      12 48.5   +20  02  d  Com                 vF,  eS,  R,  bM,  D* 13  np
I3800      12 48.5   +36  35  d  CVn                 F,  S,  iF,  N
 4697    Gx 12 48.6   -05  48  s  Vir    6.0    9.3   vB,  L,  lE  45deg  +/-  , smbMN
I3797    ?  12 48.6   +11  36  x  Vir                 F,  pS,  vmE,  lbM
I3798      12 48.7   +09  14  d  Vir                 F,  S
I3802      12 48.7   +38  15  d  CVn                 F,  vS,  R  bM
I3805      12 48.7   +38  15  d  CVn                 gr  of  eF  neb  and  st
 4696    Gx 12 48.8   -41  19  s  Cen    3.5   10.7   pB,  L,  R,  gbM,  r
 4704    Gx 12 48.8   +41  55  s  CVn    1.2   15.  p cF,  S,  R,  gbM
I3804    Gx 12 48.8   +35  20  v  CVn    1.6         pF,  pL,  E  40deg  ,  bM;  = 4711
 4711    Gx 12 48.9   +35  21  r  CVn           14.  p F,  S,  E,  glbM,  er;  = IC 3804
I3806    Gx 12 48.9   +14  54  v  Com    1.7         vS,  R,  bM,  mag  13.5
 4699    Gx 12 49.0   -08  40  s  Vir    3.5    9.6  vB,  R,  vmbNrN,  r
 4702    Gx 12 49.0   +27  11  r  Com          15.  p pF,  S,  viF
I3799    Gx 12 49.0   -14  23  m  Crv    2.5   14.  p vF,  pL,  vmE  210deg  ,  1st  of  7
I3801    ?  12 49.0   +10  57  x  Vir                 cB,  pS,  stell
I3808    Gx 12 49.0   +40  36  m  CVn    0.6   15.  p pF,  S,  iF,  N,  *14  f  0'.5
 4700    Gx 12 49.1   -11  25  s  Vir    3.0   12.  p F,  L,  mE  40deg  ,  vlbM,  B*  p
I3803      12 49.1   +10  38  d  Vir                 eF,  pL,  ?
I3809      12 49.1   +36  29  d  CVn                 pF,  S,  iF,  N
I3810      12 49.1   +40  39  d  CVn                 cF,  cS,  iF,  N
 4701    Gx 12 49.2   +03  23  s  Vir    3.0   12.4   F,  S
 4703    Gx 12 49.3   -09  07  s  Vir    2.8   15.  p eF,  cS,  pmE
 4705    Gx 12 49.4   -05  12  s  Vir    3.0   14.  p cF,  pL,  lE
I3811      12 49.4   +21  28  d  Com                 F,  eS,  iF,  N
I3807      12 49.5   -04  24  d  Vir                 eeF,  L,  mE,  *7  sf
I3814      12 49.5   +20  03  d  Com                 vF,  vS,  E  110deg
 4710    Gx 12 49.6   +15  10  s  Com    5.1   11.0   cB,  pL,  vmE  28deg  ,  sbMN
 4712    Gx 12 49.6   +25  28  s  Com    2.6   13.0   vF,  pL
I3815      12 49.6   +19  16  d  Com                 vF,  vS,  R
I3816    Gx 12 49.6   +37  15  m  CVn    0.5   15.  p pF,  vS,  R
 4708    Gx 12 49.7   -11  06  s  Vir    1.6   14.  p eF,  S
I 824    Gx 12 49.7   -04  34  m  Vir    0.5   15.  p pB,  pL,  E  pf,  biN
I3817      12 49.7   +22  50  d  Com                 neb  *15
I3820      12 49.7   +37  07  d  CVn                 vF,  vS,  iF,  N
I3823      12 49.7   +40  53  d  CVn                 vF,  vS,  iF,  N
 4715    Gx 12 49.8   +27  49  s  Com    2.0   15.  p F,  S,  R
I3818      12 49.8   +21  45  d  Com                 vF,  S,  iF,  *14  p
 4706    Gx 12 49.9   -41  17  s  Cen    2.2   12.7   vF,  vS,  R,  psbM
I3812    Gx 12 49.9   -06  42  m  Vir    0.8   15.  p eeF,  eS,  cE  15deg
 4713    Gx 12 50.0   +05  19  s  Vir    2.8   11.8   pB,  L,  vlE,  glbM
I3813    Gx 12 50.0   -25  55  c  Hya    1.5         eF,  S,  E,  *8  nf
I3821      12 50.0   +20  58  d  Com                 vF,  vS,  iF,  N
 4709    Gx 12 50.1   -41  23  s  Cen    2.7         pB,  cS,  R,  gbM
 4719    Gx 12 50.1   +33  09  s  CVn    1.8   14.  p vF,  stellar
 4732    Gx 12 50.1   +52  52  r  UMa          15.  p F,  S,  vsmbM
 4750    Gx 12 50.1   +72  52  s  Dra    2.3   12.  p pB,  L,  R,  vg,  vsbM
 4721    Gx 12 50.2   +27  20  r  Com          15.  p vF,  vS;  r?
 4714    Gx 12 50.3   -13  18  r  Crv          14.  p F,  pS,  R,  gbM
I 825      12 50.3   -05  23  d  Vir                 eeF,  pS,  R,  nearly  bet  2  st
I3819      12 50.3   -14  23  d  Crv                 eF,  vS,  2nd  of  7
 4725    Gx 12 50.4   +25  30  s  Com   11.0    9.2   vB,  vL,  E,  vg,  vsvmbMeBN
I3822    Gx 12 50.4   -14  19  m  Crv    1.1   15.  p eF,  vS,  3rd  of  7
I3828    D* 12 50.4   +37  57  x  CVn                 F,  vS,  iF;  neb*?
 4716    Gx 12 50.5   -09  26  r  Vir          15.  p np  part  of  Dneb,  smbM
 4718    Gx 12 50.5   -05  17  s  Vir    2.1   15.  p eF,  vS,  bet  2  st
 4728    Gx 12 50.5   +27  26  v  Com    1.1         eF,  eS
I3824      12 50.5   -14  26  d  Crv                 eF,  vS,  4th  of  7
 4717    Gx 12 50.6   -09  26  r  Vir          15.  p sf  4716  &  fainter
I3825      12 50.6   -14  30  d  Crv                 eeF,  vS,  *14?,  5th  of  7
 4720    Gx 12 50.7   -04  07  r  Vir          15.  p eF,  S,  bM
I3826    Gx 12 50.7   -09  00  m  Vir    0.6   15.  p vF,  vS,  mbM
I3827    Gx 12 50.8   -14  29  m  Crv    0.8   14.  p F,  vS,  R,  *11  s  0'.6;  6th  of  7
I3832      12 50.8   +39  49  d  CVn                 F,  S,  iF,  p  dif
 4724    Gx 12 50.9   -14  20  s  Crv    1.5   15.  p F,  vS,  R,  stellar,  np  of  2
 4736    Gx 12 50.9   +41  07  s  CVn   11.0    8.2   vB,  L,  iR,  vsvmbMBN,  r;  = M94
 4737    Gx 12 50.9   +34  09  r  CVn          15.  p eF,  vS,  pmE
 4741    Gx 12 50.9   +47  40  r  CVn          14.  p vF,  S,  R,  psbM
I3830      12 50.9   +19  50  d  Com                 vF,  eS,  bM,  spir
I3835      12 50.9   +40  12  d  CVn                 vF,  vS,  iF,  N
 4727    Gx 12 51.0   -14  20  s  Crv    1.6   13.  p F,  pL,  R,  lbM,  sf  of  2
 4731    Gx 12 51.0   -06  24  s  Vir    6.5   11.  p vF,  pL,  E
 4735    Gx 12 51.0   +28  56  s  Com    0.7   15.  p vF,  vlbM
 4723    Gx 12 51.1   -13  15  r  Crv          15.  p 2nd  of  2,  vF,  vS,  f  4714;  nonexistent?
 4733    Gx 12 51.1   +10  55  s  Vir    2.3   13.  p cF,  pL,  lE,  r,  *12  p
 4738    Gx 12 51.1   +28  48  s  Com    2.3   15.  p vF,  E  30deg  ,  vlbM
I3836      12 51.1   +40  11  d  CVn                 vF,  vS,  iF,  N
 4734    Gx 12 51.2   +04  52  s  Vir    1.2   14.  p vF,  vS,  R
 4749    Gx 12 51.2   +71  38  s  Dra    1.9   14.  p vF,  cL,  E  135deg  +/-
I 830    Gx 12 51.2   +53  41  m  UMa    0.8   14.  p vF,  vS,  lE,  stellar
 4745    Gx 12 51.3   +27  26  v  Com    0.7         eF,  *6  n
I 826    Gx 12 51.3   +31  04  m  Com    0.6   15.  p F,  pS,  R,  gbM
I3831    Gx 12 51.3   -14  34  m  Crv    1.4   14.  p F,  vS,  R,  bM,  7th  of  7
 4722    Gx 12 51.5   -13  19  r  Crv          13.  p vF,  vS,  f  4714,  with  *11  4s  f;  = IC 3833
 4726    Gx 12 51.5   -14  13  r  Crv          14.  p vF,  4'  n  of  Dneb;  = IC 3834
 4740    Gx 12 51.5   -14  13  D  Crv                 pF,  pS,  R,  mbN;  = 4726
I3833    Gx 12 51.5   -13  19  m  Crv    1.8   13.  p vF,  S,  iF,  bM
I3834    Gx 12 51.5   -14  13  m  Crv    0.7   14.  p vF,  lbM,  *13  p  0'.8
I3837      12 51.5   +19  43  d  Com                 eF,  vS,  bM,  spir
 4739    Gx 12 51.6   -08  25  s  Vir    1.7   14.  p F,  pL,  lE,  pglbM
I3842      12 51.6   +40  22  d  CVn                 vF,  cS,  dif;  neb*  np  0'.5
I3843      12 51.7   +39  00  d  CVn                 F,  vS,  mE  160deg  ,  am  3  st
 4729    Gx 12 51.8   -41  08  c  Cen    1.3         neb,  1st  of  3,  p  &  a  little  s  of  4744
 4742    Gx 12 51.8   -10  27  s  Vir    2.3   11.1   pB,  vS,  vbMN  =  *11,  *10  sf
 4747    Gx 12 51.8   +25  47  s  Com    3.6   12.4   F,  pL,  lE
I3839      12 51.8   +20  25  d  Com                 vF,  S,  bM,  spir
I3840      12 51.8   +21  44  d  Com                 vF,  S,  iF,  *  inv  sp
I3841      12 51.8   +22  21  d  Com                 vF,  vS,  iF,  ?
 4746    Gx 12 51.9   +12  05  s  Vir    2.5   13.  p pB,  mE,  r
 4730    Gx 12 52.0   -41  09  c  Cen    1.2         2nd  of  3
I 827    Gx 12 52.0   +16  17  u  Com    1.0   15.  p vF,  S,  E  pf,  dif
I3838      12 52.0   -14  28  d  Crv                 vF,  S,  lbM,  *13  s  0'.8
I3844      12 52.1   +39  49  d  CVn                 vF,  S,  iF,  N
 4748    Gx 12 52.2   -13  24  r  Crv                 F,  vS,  iR,  gbM
I3829    Gx 12 52.2   -29  50  c  Hya    2.3         B,  S,  lE,  *9  sf
I3845      12 52.2   +38  37  d  CVn                 vF,  S,  iF,  N
 4743    Gx 12 52.3   -41  24  s  Cen                 F,  R,  gbM
 4752     * 12 52.3   +13  29  r  Com                 vF,  S,  E,  r
 4754    Gx 12 52.3   +11  19  s  Vir    4.7   10.6   B,  pL,  R,  psbM,  p  of  2
I 828      12 52.3   -08  08  d  Vir                 F,  vS,  R,  N  =  13.5m
 4744    Gx 12 52.4   -41  04  s  Cen                 F,  L,  E,  gbM,  3rd  of  3
 4753    Gx 12 52.4   -01  12  s  Vir    5.4    9.9   cB,  L,  vlE,  vglbM
I 829    Gx 12 52.4   -15  31  m  Crv    0.4   15.  p neb  *13
I3847      12 52.6   +22  04  d  Com                 vF.vS,  iF,  neb  *15  sp
I3849      12 52.6   +40  46  d  CVn                 vF,  vS,  iF,  N,  *14  nf
 4758    Gx 12 52.7   +15  51  s  Com    3.2   14.  p vF,  pL,  E?
I 831    Gx 12 52.7   +26  29  x  Com          15.  p F,  S,  R,  bM
I3846      12 52.7   +13  39  d  Com                 B,  pS,  N  =  *9.2
I3848      12 52.7   +21  25  d  Com                 vF,  vS,  E  120deg
I3850    Gx 12 52.7   +40  06  m  CVn    0.9   15.  p pF,  vS,  iF,  N
 4757    Gx 12 52.8   -10  19  s  Vir    1.8   15.  p vF
 4751    Gx 12 52.9   -42  40  r  Cen                 B,  pS,  R,  vg,  vsmbM
 4756    Gx 12 52.9   -15  25  s  Crv    2.0   13.  p vF,  pS,  r
 4762    Gx 12 52.9   +11  14  s  Vir    8.7   10.2   pB,  vmE  31deg  ,  3  B  st  s,  f  of  2
 4759    Gx 12 53.1   -09  11  r  Vir          15.  p pL,  double,  *10  2'  sp
 4760    Gx 12 53.1   -10  30  s  Vir    1.8   13.  p pB,  R
 4761    Gx 12 53.1   -09  11  r  Vir          14.  p eF,  eS,  1'  f  Dneb  4759
 4766    Gx 12 53.1   -10  23  s  Vir    1.6   15.  p vF
I3851      12 53.1   +21  55  d  Com                 vF,  vS,  iF,  ?,  *12  s
I3852    Gx 12 53.1   +35  47  u  CVn    1.4   16.  p F,  pS,  E  60deg  ,  bM
 4764    Gx 12 53.2   -09  11  r  Vir          16.  p eF,  eS,  sf  Dneb  4759
 4765    Gx 12 53.2   +04  28  s  Vir    1.4   13.  p F,  cS,  R,  gbM
 4774    Gx 12 53.2   +36  49  s  CVn    0.6   14.4   eF,  cS,  R,  bM
I3853      12 53.2   +38  50  d  CVn                 eF,  S,  p  dif
I3854      12 53.2   +40  51  d  CVn                 vF,  pL,  dif,  diffic,  *15  f
 4768     * 12 53.3   -09  32  F  Vir                 vF,  vS,  p  4770  on  parallel
 4769    D* 12 53.3   -09  32  F  Vir                 vF,  vS,  p  4770  on  parallel
 4763    Gx 12 53.4   -17  00  s  Crv    1.7   13.  p vF,  S,  lbM
 4771    Gx 12 53.4   +01  16  s  Vir    4.0   13.  p F,  pL,  mE,  *9  p  90deg
I3855      12 53.4   +36  47  d  CVn                 pF,  eS,  R,  bM
 4770    Gx 12 53.5   -09  31  r  Vir          14.  p vF,  vS
 4772    Gx 12 53.5   +02  10  s  Vir    3.3   13.  p pF,  pS,  R,  mbM
 4785    Gx 12 53.5   -48  46  r  Cen                 vF,  S,  R,  glbM
 4755    OC 12 53.6   -60  20  s  Cru   10.     4.2   Cl,  vL,  st  vB  (kappa  Cru)
 4773    Gx 12 53.6   -08  38  s  Vir    2.0   15.  p vF,  S
 4775    Gx 12 53.8   -06  37  s  Vir    2.2   12.  p F,  cL,  R,  vglbM,  r
 4779    Gx 12 53.8   +09  44  s  Vir    2.3   13.  p vF,  pL,  R,  r
I 832    Gx 12 53.8   +26  27  v  Com                 F,  S,  R,  bM,  D*  nf
I3856      12 53.8   +20  06  d  Com                 vF,  S,  iF,  *15  inv  p
I3862    Gx 12 53.8   +36  06  u  CVn    1.0   16.  p vF,  pS,  dif,  *15  att
 4767    Gx 12 53.9   -39  43  s  Cen    2.6   13.  p B,  pS,  lE,  mbM
I3857      12 53.9   +19  36  d  Com                 eF,  vS,  R,  bM,  2  eF  st  nr
I3858      12 53.9   +20  47  d  Com                 F,  vS,  R,  bM,  neb  *14  &  *13  sp
I3861      12 53.9   +38  17  d  CVn                 F,  eS;  neb*?
I3863      12 53.9   +38  29  d  CVn                 F,  S,  iF,  *14  att
 4777    Gx 12 54.0   -08  47  s  Vir    2.3   15.  p vF,  S
 4776     - 12 54.1   -09  13  r  Vir                 F,  S,  R,  vlbM,  p  of  Dneb
 4778     - 12 54.1   -09  12  r  Vir                 vF,  S,  R,  vlbM,  f  of  Dneb
 4780    Gx 12 54.1   -08  37  s  Vir    2.1   14.  p vF,  f  4773  and  4777
 4787    Gx 12 54.1   +27  04  r  Com          15.  p vF,  vS,  4789  f
I3860      12 54.1   +19  18  d  Com                 vF,  vS,  R,  bM
 4788    Gx 12 54.2   +27  19  r  Com          15.  p vF,  S
I3864      12 54.2   +18  57  d  Com                 vF,  vS,  iF,  *14  s  30";  many  other  neb  about
I3865      12 54.2   +18  52  d  Com                 vF,  vS,  R,  bM
 4789    Gx 12 54.3   +27  04  s  Com    1.7   12.0   F,  R,  *9  att  1'  n
I3866    OC 12 54.3   +22  22  x  Com                 vF,  S,  iF,  N;  Cl?
I3867      12 54.3   +18  56  d  Com                 vF,  S,  iF,  N
I3868      12 54.3   +19  00  d  Com                 vF,  vS,  iF,  N
 4781    Gx 12 54.4   -10  32  s  Vir    3.5   12.  p cB,  vL,  mE
I3859    OC 12 54.4   -09  06  x  Vir                 vF;  eF  Cl?
I3869      12 54.4   +18  58  d  Com                 vF,  vS,  iF,  N
I3870      12 54.4   +22  23  d  Com                 vF,  S,  iF,  p  dif
I3871      12 54.4   +18  56  d  Com                 vF,  vS,  R,  bM
 4786    Gx 12 54.5   -06  52  s  Vir    2.0   13.  p pB,  pS,  mbM,  r
I3872      12 54.5   +18  58  d  Com                 vF,  vS,  iF,  N
I3873      12 54.5   +18  53  d  Com                 vF,  vS,  iF,  N
I3878      12 54.5   +40  04  d  CVn                 vF,  vS,  bM,  spir
I3879    Gx 12 54.5   +38  38  m  CVn    0.6   16.  p F,  S,  R,  bM
 4782    Gx 12 54.6   -12  34  s  Crv    1.5   11.7   pF,  pS,  R,  mbM,  p  of  Dneb
 4783    Gx 12 54.6   -12  33  s  Crv    1.7   11.8   pF,  pS,  R,  mbM,  f  of  Dneb
 4784    Gx 12 54.6   -10  37  s  Vir    1.8   15.  p eF,  eS
 4793    Gx 12 54.6   +28  56  s  Com    2.9   11.7   pB,  pS,  lE,  *8  nf  1'
 4800    Gx 12 54.6   +46  32  s  CVn    1.8   12.  p pB,  cS,  R,  psbM,  *14  p
 4801    Gx 12 54.6   +53  06  r  UMa          15.  p eF,  S,  lE
I3874      12 54.6   +18  57  d  Com                 vF,  vS,  iF,  *15  sf  20"
I3875      12 54.6   +22  02  d  Com                 vF,  S,  iF,  N,  *14  p
I3885      12 54.7   +37  09  d  CVn                 F,  S,  R,  neb*
I3887      12 54.7   +40  18  d  CVn                 vF,  vS,  iF,  N
I3888    Gx 12 54.7   +39  34  m  CVn    0.9   16.  p F,  S,  lE  60deg  ,  N
 4791    Gx 12 54.8   +08  03  r  Vir          15.  p eF,  vS,  lE,  vlbM
 4809    Gx 12 54.8   +02  39  s  Vir    1.9   14.  p F,  Dneb  with  4810,  E  perpendicular  to  each
    other
 4810    Gx 12 54.8   +02  38  s  Vir    0.8   15.  p F,  Dneb  with  4809
I3876      12 54.8   +19  01  d  Com                 vF,  vS,  R,  bM
I3877      12 54.8   +19  18  d  Com                 pF,  cL,  E  20deg  ,  bM
I3880      12 54.8   +22  30  d  Com                 vF,  S,  viF
I3881    Gx 12 54.8   +19  11  s  Com    3.9   13.  p vF,  vS,  R,  bM
I3890      12 54.8   +37  11  d  CVn                 vF,  S,  iF,  N
 4790    Gx 12 54.9   -10  15  s  Vir    1.8   13.  p pF,  pS,  iR
 4797     - 12 54.9   +27  21  r  Com                 F,  S,  R,  lbM;  nonexistent?
I3882      12 54.9   +22  34  d  Com                 vF,  vS,  iF,  N
I3889      12 54.9   +36  01  d  CVn                 vF,  S,  iF,  diffic
 4795    Gx 12 55.0   +08  04  s  Vir    1.7   13.  p pB,  pL,  R,  bM,  r
 4798    Gx 12 55.0   +27  25  s  Com    1.3   13.1   pF,  pS,  gbM
I3884      12 55.0   +19  41  d  Com                 F,  S,  R,  bM,  *  14s
I3886      12 55.0   +19  01  d  Com                 vF,  S,  iF,  N
I3891      12 55.0   +36  03  d  CVn                 vF,  S,  iF,  diffic
 4792    Gx 12 55.1   -12  30  v  Crv    1.1         vS,  R,  7'  nnp  of  4794
 4796    Gx 12 55.1   +08  04  r  Vir          13.  p eF,  eS,  alm  stell,  close  f  4795
I3892      12 55.1   +39  13  d  CVn                 F,  S,  iF
I3893      12 55.1   +38  34  d  CVn                 vF,  S,  iF,  N
 4794    Gx 12 55.2   -12  37  s  Crv    2.3   14.  p vF,  S,  2  or  3  st  near
I3895      12 55.2   +39  12  d  CVn                 F,  cS,  iF,  N,  *15  nf  conn
 4799    Gx 12 55.3   +02  54  r  Vir          14.  p cF,  S,  vS*  att
I3883      12 55.3   -08  09  d  Vir                 eF,  vS,  mE  5deg
I3897      12 55.3   +39  40  d  CVn                 F,  vS,  E  40deg  ,  bM
 4805    Gx 12 55.4   +27  57  r  Com                 vF
 4814    Gx 12 55.4   +58  21  s  UMa    3.2   13.  p B,  pS,  vlE,  vgbM
I3898      12 55.4   +37  35  d  CVn                 eF,  vS,  v  diffic,  att  eF*
 4807    Gx 12 55.5   +27  31  s  Com    1.2   14.  p F,  pS,  R,  bM
I3894      12 55.5   +19  04  d  Com                 vF,  vS,  iF,  N
I3902      12 55.6   +36  00  d  CVn                 pF,  vS,  neb*
I3903      12 55.6   +40  24  d  CVn                 vF,  vS,  iF,  N
 4803    Gx 12 55.7   +08  14  r  Vir          15.  p eF,  eS,  R,  lbM
I3899      12 55.7   +20  38  d  Com                 vF,  S
I3900    Gx 12 55.7   +27  15  v  Com    0.7         pB,  S,  bMN
 4802    Gx 12 55.8   -12  03  s  Crv          12.  p vF,  S,  *10  att
 4808    Gx 12 55.8   +04  18  s  Vir    2.7   12.  p pB,  cL,  E  135deg  +/-
I3906      12 55.8   +40  28  d  CVn                 vF,  S,  iF,  N
 4804     - 12 55.9   -13  02  r  Crv                 S,  att  to  pB*;  = 4802?
I3901     * 12 55.9   +21  56  x  Com                 eF,  vS,  E  95deg
I3904    Gx 12 55.9   +36  18  m  CVn    0.5   15.  p F,  S,  bM,  spir
I 836    Gx 12 56.0   +63  37  u  Dra    1.4   15.  p eeF,  vS,  v  diffic,  bet  2  st
I3909      12 56.0   +40  23  d  CVn                 vF,  vS,  R,  bM
I3905      12 56.1   +19  51  d  Com                 vF,  S,  iF
I3910      12 56.1   +39  43  d  CVn                 vF,  vS,  R,  bM;  neb  D*?
I3912      12 56.1   +39  55  d  CVn                 F,  vS,  iF,  N
 4806    Gx 12 56.2   -29  30  r  Hya          14.  p F,  cS,  R,  gvlbM
 4816    Gx 12 56.2   +27  45  s  Com    1.6   15.  p vF,  pL
 4817     - 12 56.2   +28  00  r  Com                 vF,  no  N;  nonexistent?
I3911      12 56.2   +35  38  d  CVn                 vF,  pS,  dif,  diffic
I3907      12 56.3   +18  47  d  Com                 eF,  S,  iF,  N,  *13  sf  1'
 4834    Gx 12 56.4   +52  18  r  CVn          15.  p vF,  S,  iR,  bM
I3914      12 56.4   +36  22  d  CVn                 eF,  vS,  iF,  N
 4819    Gx 12 56.5   +26  59  s  Com    1.2   14.  p vF,  pL,  iF
 4821    Gx 12 56.5   +26  57  s  Com    0.7   15.  p vF,  vS,  4819  np
I 834      12 56.5   +26  20  D  Com                 pF,  pS,  sbM
I3913    Gx 12 56.5   +27  17  m  Com    0.6   15.  p F,  S,  R
I3916    Gx 12 56.5   +38  37  u  CVn    1.1   16.  p pF,  S,  bM,  spir?
 4813    Gx 12 56.6   -06  48  r  Vir          15.  p F,  S,  R,  bM
 4824    Gx 12 56.6   +27  31  r  Com                 vF,  vS
I3896    Gx 12 56.6   -50  19  s  Cen    2.2   13.  p bM,  mag  14
 4826    Gx 12 56.7   +21  41  s  Com    9.3    8.5   !  vB,  vL,  vmE  120deg  +/-  ,  bMSBN;  = M64
 4827    Gx 12 56.7   +27  11  s  Com    1.7   13.0   F,  cL
 4828    Gx 12 56.7   +28  01  r  Com          15.  p F,  S,  R
I 833      12 56.7   -06  44  d  Vir                 vF,  S,  R
I3908      12 56.7   -07  35  d  Vir                 eF,  eS,  cE  160deg  ;  F  trail?
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I3915      12 56.7   +20  07  d  Com                F, vS,  spir,  *14  inv  s
 4818   Gx 12 56.8   -08  31  s  Vir    4.5   12.  p pB,  L,  pmE  0deg  ,  gbM
I3919      12 56.8   +38  32  d  CVn                F, vS,  bM,  spir
I3920      12 56.8   +39  58  d  CVn                F,  vS,  iF,  N
 4811   Gx 12 56.9   -41  48  r  Cen                eF,  cS,  R,  gbM,  p  of  2
 4812   Gx 12 56.9   -41  49  r  Cen                eF,  S,  R,  gbM,  f  of  2
 4837   Gx 12 56.9   +48  18  s  CVn    1.4   14.  p neb?
I 835   Gx 12 56.9   +26  29  v  Com    0.6         F,  S,  R
I3917   Gx 12 56.9   +22  22  x  Com                eF,  vS,  iF,  N
I3918      12 56.9   +22  22  x  Com                pF,  vS,  bM,  spir;  =  IC  3917
 4820   Gx 12 57.0   -13  42  r  Vir          15.  p vS,  sp  of  4825
 4822   Gx 12 57.0   -10  45  r  Vir          14.  p F,  st  inv
I3921      12 57.0   +38  38  d  CVn                F,  vS,  bM,  spir
I3922      12 57.0   +38  29  d  CVn                vF,  vS,  iF
I3923      12 57.0   +37  57  d  CVn                pF,  eS,  E,  bM
 4825   Gx 12 57.2   -13  40  s  Vir    2.0   12.1   pB,  iF,  bM
 4857   Gx 12 57.2   +70  12  r  Dra          14.  p eF,  vS,  iR,  vlbM
 4829   Gx 12 57.3   -13  44  r  Vir                vS,  sf  4825
I3925      12 57.3   +36  25  d  CVn                pF,  vS,  E  60deg  ,  bM
I3928      12 57.3   +40  26  d  CVn                vF,  pL,  dif,  *13  att
 4823      12 57.4   -13  44  F  Vir                vS,  sp  of  4825
 4830   Gx 12 57.4   -19  42  r  Vir          13.  p F,  L,  st  inv,  *8  5'  sf
 4839   Gx 12 57.4   +27  30  s  Com    4.2   14.  p F,  pL,  R
I3924      12 57.4   +18  47  d  Com                eF,  S,  R
I3930      12 57.4   +38  46  d  CVn                F,  vS,  N;  neb*?
 4836   Gx 12 57.5   -12  45  r  Vir          13.  p vF,  L,  dif
 4840   Gx 12 57.5   +27  37  s  Com    0.6   15.  p vF,  vS
 4841   Gx 12 57.5   +28  29  s  Com    1.9   11.5   pF,  pL,  R,  vS*  att
I 837   Gx 12 57.5   +26  30  x  Com          15.  p F,  S,  R
I3926      12 57.5   +22  49  d  Com                vF,  vS,  iF,  N
 4831   Gx 12 57.6   -27  18  r  Hya          14.  p F,  S,  R,  gbM
 4842   Gx 12 57.6   +27  29  s  Com    0.6   15.  p vF,  vS,  4839  sp
I3929      12 57.7   +20  24  d  Com                vF,  vS,  bM,  spir
 4832   Gx 12 57.8   -39  44  A  Cen                pF,  vS,  R,  sbM  *17,  *10  70deg
 4838   Gx 12 57.9   -13  03  r  Vir          13.  p vF,  pS,  R,  3  S  st  sp
 4846   Gx 12 57.9   +36  22  r  CVn          14.  p eF
I3933      12 57.9   +36  39  d  CVn                F,  vS,  iF,  N
 4815   OC 12 58.0   -64  57  s  Mus    3.     8.6   Cl,  pL,  pRi,  iF,  st  10...18
 4843   Gx 12 58.0   -03  37  r  Vir          14.  p cF,  E,  er,  *  sf  30°
 4845   Gx 12 58.0   +01  35  s  Vir    5.0   12.  p pF,  pL,  pmE,  vgbM,  *  nf  30deg
I3931      12 58.0   +19  37  d  Com                cF,  S,  iF,  N
 4835   Gx 12 58.1   -46  15  s  Cen    3.4   12.  p F,  pL,  mE,  vgbM
 4844    * 12 58.1   -13  04  A  Vir                F,  S
 4848   Gx 12 58.1   +28  15  s  Com    1.8   14.  p pF,  S,  lE
I3932      12 58.1   +19  35  d  Com                vF,  eS,  R  bM
 4849   Gx 12 58.2   +26  24  s  Com    2.2   15.  p pB,  R,  bM;  =  IC  3935
I 838   Gx 12 58.2   +26  24  x  Com          14.  p vF,  1'.5  nf  4849
I3927   Gx 12 58.2   -22  53  c  Hya    1.4         vF,  vS,  *10  np,  *7  s  10'
I3935      12 58.2   +26  23  x  Com                pB,  S,  R,  N,  r,  IC  838  f;  =  4849
I3941      12 58.2   +39  46  d  CVn                F,  vS,  iF,  N
 4851   Gx 12 58.3   +28  09  r  Com          15.  p F,  vS,  r;  =  IC  839?
I3934      12 58.3   +18  50  d  Com                F,  S,  iF
I3936      12 58.3   +19  03  d  Com                neb  *13,  *12.5  f  1'
I3940      12 58.3   +35  50  d  CVn                cF,  vS,  R,  bM
I3942      12 58.3   +36  06  d  CVn                eF,  eS,  iF,  N
 4850   Gx 12 58.4   +27  58  s  Com    1.6   16.  p F,  S,  R
I 839   Gx 12 58.4   +28  09  x  Com                stellar,  13m
I3937      12 58.4   +18  49  d  Com                vF,  vS,  iF,  N
I3938      12 58.4   +18  45  d  Com                eF,  vS,  R,  bM,  *13  sp
 4847   Gx 12 58.5   -13  08  r  Vir                F,  S  neb*,  *9  p  40s   on  parallel
I3939      12 58.5   +18  45  d  Com                vF,  eS,  bM,  spir
I3945      12 58.5   +39  56  d  CVn                F,  vS,  iF,  N
 4853   Gx 12 58.6   +27  36  s  Com    1.2   13.1   F,  S,  R,  pslbM
I3943   Gx 12 58.6   +28  07  x  Com                pF,  vS,  iF
I 840   Gx 12 58.7   +10  37  u  Vir    1.0   15.  p F,  S,  R,  lbM,  r
I3944      12 58.7   +23  47  d  Com                F,  vS,  iF,  N
 4854   Gx 12 58.8   +27  40  s  Com          15.  p vF,  pL,  com
I3946   Gx 12 58.8   +27  49  s  Com    1.0   13.9   F,  pS,  bM
I3947   Gx 12 58.9   +27  47  v  Com                vF,  S
I3949   Gx 12 58.9   +27  50  v  Com    1.3         F,  pS,  E
I3952      12 58.9   +38  52  d  CVn                F,  cS,  iF,  N
I3956      12 58.9   +37  24  d  CVn                F,  vS,  R,  bM
 4858   Gx 12 59.0   +28  07  s  Com    0.4   16.  p F,  vS,  p  of  Dneb
 4859   Gx 12 59.0   +26  49  s  Com    1.7   15.  p F,  vS,  R
 4861   Gx 12 59.0   +34  52  s  CVn    4.1   12.2   vF,  pL,  vmE  30deg  +/-  ,  bet  2  st
I3948      12 59.0   +24  04  d  Com                vF,  vS,  iF,  N
 4860   Gx 12 59.1   +28  07  s  Com    1.0   13.5   pF,  S,  R,  f  of  Dneb
 4868   Gx 12 59.1   +37  19  s  CVn    1.7   13.  p pB,  S,  R,  mbM
I3950      12 59.1   +18  44  d  Com                F,  vS,  R,  bM
I3955   Gx 12 59.1   +28  00  v  Com                vF,  S,  N  14  mag
I3957   Gx 12 59.1   +27  46  x  Com          16.  p cF,  vS,  R,  bM
I3959   Gx 12 59.1   +27  47  v  Com    0.6         F,  pS,  R,  lbM
I3960   Gx 12 59.1   +27  51  v  Com    0.4         vF,  pS,  diffic
I3961   Gx 12 59.1   +34  52  t  CVn    4.2   13.  p pF,  pL,  lE  30deg  ,  bM;  =  4861
 4864   Gx 12 59.2   +27  59  s  Com    0.6   13.6   F,  S,  p  of  2
I3951      12 59.2   +18  46  d  Com                F,  vS,  iF,  N;  neb  D*?
I3953      12 59.2   +23  05  d  Com                vF,  S,  R,  bM,  dif
I3954      12 59.2   +19  16  d  Com                F,  vS,  R,  bM
I3958      12 59.2   +24  02  d  Com                vF,  vS,  iF,  N
I3963   Gx 12 59.2   +27  47  v  Com    0.7         vF,  vS,  R,  bM
I3964    * 12 59.2   +27  51  x  Com                eF,  vS
I3967   Gx 12 59.2   +36  07  m  CVn    0.4   15.  p pF,  vS,  iF,  N
I3970      12 59.2   +40  24  d  CVn                F,  vS,  E  120deg  ,  *15  att  p
I3975   Gx 12 59.2   +38  53  m  CVn    0.5   15.  p pF,  vS,  E  40deg  ,  bM
 4855   Gx 12 59.3   -13  13  r  Vir          14.  p F,  S,  st  inv
 4856   Gx 12 59.3   -15  02  s  Vir    4.6   10.4   B,  R,  psmbM,  *13  np
 4865   Gx 12 59.3   +28  05  s  Com    1.4   13.3   vF,  vS,  *7-8  f  13s
 4867   Gx 12 59.3   +27  58  s  Com    1.1   16.  p vF,  vS,  stellar,  f  4864
 4870   Gx 12 59.3   +37  00  r  CVn                pF,  lE,  bet  2  st
I3962      12 59.3   +23  40  d  Com                vF  neb*
I3966   Gx 12 59.3   +35  52  m  CVn    0.4   15.  p F,  S,  iF,  N
I3972      12 59.3   +37  17  d  CVn                vF,  vS,  R,  bM
I3977      12 59.3   +36  48  d  CVn                vF,  S,  iF,  N
I3980      12 59.3   +39  09  d  CVn                eF,  vS,  iF
I3982      12 59.3   +40  05  d  CVn                F,  vS,  R,  bM,  bet  2  st  13
I3983      12 59.3   +39  15  d  CVn                F,  S,  iF,  N
 4862   Gx 12 59.4   -14  07  r  Vir          15.  p eF,  S,  R
 4869   Gx 12 59.4   +27  55  s  Com    1.1   13.5   cF,  S,  R,  *7  n
I3965      12 59.4   +18  51  d  Com                F,  vS,  iF,  N
I3968   Gx 12 59.4   +27  58  x  Com                eF,  vS,  *14  nr
I3979      12 59.4   +36  20  d  CVn                F,  eS,  R,  bM
I3981      12 59.4   +37  14  d  CVn                eF,  vS,  iF,  N,  diffic
I3987      12 59.4   +38  44  d  CVn                pF,  vS,  R,  bM
 4866   Gx 12 59.5   +14  10  s  Vir    6.5   11.0   B,  pL,  mE  90deg  ,  sbMN,  S*  inv
 4871   Gx 12 59.5   +27  57  s  Com    0.5   15.  p vF,  vS,  stell  N
I3969      12 59.5   +19  39  d  Com                eF,  S,  iF
I3971      12 59.5   +22  51  d  Com                vF,  vS,  iF,  N
I3973   Gx 12 59.5   +27  53  v  Com                F,  vS,  R,  N  13  mag
I3976   Gx 12 59.5   +27  51  v  Com                *14  inv  in  vF  neb
I3988      12 59.5   +37  15  d  CVn                vF,  S,  iF
I3989      12 59.5   +36  47  d  CVn                vF,  vS,  iF,  N
I3992      12 59.5   +36  46  d  CVn                F,  vS,  iF,  N
I3993      12 59.5   +40  36  d  CVn                F,  vS,  iF,  N
I3996      12 59.5   +40  28  d  CVn                F,  vS,  sbM  *
 4833   Gb 12 59.6   -70  53  s  Mus   13.5    7.4   glob.  cl.  ,  B,  L,  R,  g,  vsbM,  st  12
 4863   Gx 12 59.6   -14  01  r  Vir          15.  p eF,  S,  mE  45deg  ,  sbMN
 4872   Gx 12 59.6   +27  57  s  Com    1.0   13.7   pF,  pS,  R
 4873   Gx 12 59.6   +27  59  v  Com    0.8   14.2   vF,  vS
 4874   Gx 12 59.6   +27  58  s  Com    2.7   11.9   F,  4869  and  4872  p
 4875   Gx 12 59.6   +27  54  s  Com          16.  p vF,  vS,  stellar
I3978      12 59.6   +19  38  d  Com                eF,  S,  iF

I3990   Gx 12 59.6   +28  54  v  Com    1.3         F,  S,  R,  N,  r
I3991   Gx 12 59.6   +28  56  x  Com          15.  p F,  S,  R,  FN,  r
I3995      12 59.6   +38  53  d  CVn                F,  S,  iF,  N
I3997      12 59.6   +36  42  d  CVn                vF,  S,  iF
I4000      12 59.6   +39  35  d  CVn                vF,  vS,  iF;  neb*?
I4001      12 59.6   +38  52  d  CVn                pF,  vS,  R,  bM
 4876   Gx 12 59.7   +27  55  s  Com    0.4   15.  p vF,  vS,  no  Nucl
I3984      12 59.7   +19  38  d  Com                eF,  S,  iF
I3985      12 59.7   +19  35  d  Com                cF,  eS,  R,  bM
I4002      12 59.7   +36  46  d  CVn                pF,  S,  iF,  N
I4003      12 59.7   +38  49  d  CVn                pF,  vS,  iF,  N
I4004      12 59.7   +38  49  d  CVn                pF,  vS,  iF,  N
I 841      12 59.8   +21  49  D  Com                vF
I3994      12 59.8   +22  43  d  Com                eF,  vS,  iF;  eF*  inv?
I3998   Gx 12 59.8   +27  58  v  Com          14.7   eF,  pS
I4006      12 59.8   +37  01  d  CVn                vF,  S,  iF
 4883   Gx 12 59.9   +28  02  v  Com          14.3   vF,  S,  stellar
 4901   Gx 12 59.9   +47  12  r  CVn          15.  p pF,  S,  R,  gbM
I4009      12 59.9   +36  40  d  CVn                vF,  vS,  R,  bM
I4010      12 59.9   +37  53  d  CVn                F,  vS,  iF,  N
 4881   Gx 13 00.0   +28  15  s  Com    1.0   13.5   F,  S,  lE,  *9  sp
 4882      13 00.0   +27  59  A  Com                vF,  S,  others  near
 4884    - 13 00.0   +27  59  r  Com                chief  one  of  mult  neb;  =  4889?
 4886   Gx 13 00.0   +27  59  s  Com    0.8   13.9   F,  S,  R,  4889  f  4s
 4892   Gx 13 00.0   +26  54  s  Com    1.6   15.  p vF
I4005      13 00.0   +22  38  d  Com                vF,  vS,  iF,  N
I4013      13 00.0   +37  12  d  CVn                vF,  vS,  iF,  N
I4015      13 00.0   +37  12  x  CVn                n  part  of  Dneb,  eF,  S,  iF,  N;  =  4893
I4016      13 00.0   +37  12  x  CVn                s  part  of  Dneb,  eF,  S,  iF,  N;  =  4893
I4018      13 00.0   +40  29  d  CVn                vF,  S,  iF,  N
I4020      13 00.0   +38  36  d  CVn                eF,  pL,  dif
 4852   OC 13 00.1   -59  36  s  Cen   11.     9.  p Cl,  L,  pRi,  iR,  st  10
 4889   Gx 13 00.1   +27  58  s  Com    3.0   11.4   pB,  pmE,  bM,  *7  n
 4893   Gx 13 00.1   +37  11  r  CVn          15.  p vF,  *20  sp,  *17  nf;  =  IC  4015
I4007      13 00.1   +19  58  d  Com                vF,  vS,  R,  bM
I4008      13 00.1   +22  21  d  Com                vF,  vS,  iF,  N
I4011   Gx 13 00.1   +28  00  v  Com          15.0   eF,  vS,  N  15m
I4012   Gx 13 00.1   +28  05  v  Com          14.8   *14  in  vF  neb
I4022      13 00.1   +38  29  d  CVn                eF,  eS,  iF,  N
I4024      13 00.1   +40  31  d  CVn                vF,  vS,  iF,  N
 4880   Gx 13 00.2   +12  29  s  Vir    3.3   12.  p cF,  pL,  R,  vglbM,  r
I4014      13 00.2   +22  30  d  Com                vF,  vS,  iF,  N
I4021   Gx 13 00.2   +28  02  v  Com    0.3   14.9   *14  in  vF  neb
I4027      13 00.2   +37  08  d  CVn                F,  S,  iF,  N,  4893  np
I4029      13 00.2   +38  46  d  CVn                vF,  vS,  iF,  N
 4878   Gx 13 00.3   -06  05  r  Vir          14.  p vF,  vS,  p  of  2
 4894   Gx 13 00.3   +27  58  s  Com          16.  p pF,  S,  R
 4895   Gx 13 00.3   +28  12  s  Com    2.3   12.8   vF,  S,  R
 4898   Gx 13 00.3   +27  57  s  Com          15.  p vF,  S,  close  to  4894
I4017      13 00.3   +22  33  d  Com                vF,  vS,  E  80deg  ,  bM
I4019      13 00.3   +23  43  d  Com                F,  vS,  iF,  *14  att  nf,  *  11  sp
I4028   Gx 13 00.3   +36  15  u  CVn    1.2   15.  p F,  cS,  iF,  N
I4031      13 00.3   +39  09  d  CVn                vF,  S,  R,  bM
I4034      13 00.3   +37  03  d  CVn                cF,  S,  iF,  N
I4035      13 00.3   +40  18  d  CVn                vF,  S,  viF,  diffic
I4037      13 00.3   +39  00  d  CVn                F,  vS,  iF,  N
 4877   Gx 13 00.4   -15  17  s  Vir    2.7   13.  p pB,  pL,  mbM
I4023      13 00.4   +19  06  d  Com                vF,  vS,  iF;  ?
I4026   Gx 13 00.4   +28  03  v  Com          14.7   *14  in  vF  neb
I4032   Gx 13 00.4   +28  52  x  Com          15.  p F,  S,  R,  gbM
I4036      13 00.4   +36  55  d  CVn                vF,  vS,  iF,  N
I4038      13 00.4   +37  02  d  CVn                F,  vS,  iF,  N
 4879   Gx 13 00.5   -06  03  r  Vir          15.  p vF,  vS,  f  of  2
 4885   Gx 13 00.5   -06  50  r  Vir          15.  p vF,  S,  E
 4896   Gx 13 00.5   +28  21  s  Com    1.3   13.7   vF,  vS,  R,  mbM
I3999   Gx 13 00.5   -14  18  x  Vir                eF,  susp
I4025      13 00.5   +19  06  d  Com                vF,  vS,  iF,  N
I4030   Gx 13 00.5   +27  57  x  Com                eF,  vS,  R,  *15  inv
I4033   Gx 13 00.5   +27  58  x  Com                eF,  pS,  R
 4887   Gx 13 00.6   -14  40  s  Vir    1.6   14.  p vF,  4902  nf
 4890   Gx 13 00.6   -04  34  r  Vir          14.  p cF,  S,  iR,  bM
 4900   Gx 13 00.6   +02  30  s  Vir    2.3   11.5   cB,  cE,  *10  att  135deg  +/-
I 842   Gx 13 00.6   +29  01  x  Com          15.  p pF
I4040   Gx 13 00.6   +28  03  v  Com    1.1         vF,  S,  R,  gbM
I4048      13 00.6   +39  50  d  CVn                vF,  vS,  iF,  N
 4906   Gx 13 00.7   +27  55  v  Com          14.2   vF,  vS,  *15  p
 4914   Gx 13 00.7   +37  19  s  CVn    3.6   12.  p pB,  cS,  R,  smbM,  *17  np
 4916   Gx 13 00.7   +37  22  r  CVn                neb,  nf  4914  (?)
I4039      13 00.7   +21  41  d  Com                cF,  vS,  neb*
I4041   Gx 13 00.7   +28  00  v  Com    0.7         vF,  pS
I4042   Gx 13 00.7   +27  58  v  Com          14.3   F,  S,  bM
I4043   Gx 13 00.7   +37  06  u  CVn    1.0   16.  p vF,  S,  iF
I4046      13 00.7   +36  41  d  CVn                F,  vS,  R,  bM
I4049   Gx 13 00.7   +36  21  u  CVn    1.2   15.  p pB,  vS,  sbM  *
I4050      13 00.7   +36  40  d  CVn                vF,  S,  iF,  N;  D*?
I4052      13 00.7   +39  40  d  CVn                vF,  vS,  iF,  N
I4056   Gx 13 00.7   +39  45  u  CVn    1.1   16.  p F,  vS,  exc  N
 4891    * 13 00.8   -13  26  A  Vir                F  neb*
 4907   Gx 13 00.8   +28  09  s  Com    1.4   13.4   eF,  vS,  *13  att
 4912    - 13 00.8   +37  23  r  CVn                neb  n  of  and  in  line  with  4914  (?)
 4913    - 13 00.8   +37  21  r  CVn                nonexistent?
I4044   Gx 13 00.8   +27  55  x  Com                eF,  S,  lbM
I4045   Gx 13 00.8   +28  05  s  Com    0.7   13.9   pF,  S,  bM
I4060   Gx 13 00.8   +40  35  m  CVn    0.7   15.  p vF,  cS,  iF,  N
 4897   Gx 13 00.9   -13  27  A  Vir    2.8   13.  p F
 4899   Gx 13 00.9   -13  57  s  Vir    2.7   12.  p pF,  eL
 4908   Gx 13 00.9   +28  02  s  Com    1.1   15.  p vF,  vS
 4911   Gx 13 00.9   +27  47  s  Com    1.3   12.8   1st  of  4,  F,  pL,  *11  2'  np
 4917   Gx 13 00.9   +47  14  r  CVn          15.  p eF,  S,  E,  bM
I4051   Gx 13 00.9   +28  00  s  Com    1.3   13.4   pF,  S,  R,  bM,  4908  np
 4902   Gx 13 01.0   -14  31  s  Vir    3.0   11.2   pB,  pL,  iR,  st  nr
 4904   Gx 13 01.0   -00  02  s  Vir    2.3   12.1   pB,  pS,  R,  bM
I4047   Gx 13 01.0   +19  41  z  Com          16.  p cF,  S,  E  110deg  ,  bM
I4053      13 01.0   +22  56  d  Com                eF,  eS,  R,  bM;  others  nr?
I4054      13 01.0   +22  54  d  Com                vF,  eS,  R,  bM,  *10  f  0'.5
I4055      13 01.0   +22  54  d  Com                eF,  vS,  iF,  N;  ?
I4061      13 01.0   +39  35  d  CVn                vF,  S,  iF
I4062      13 01.0   +39  52  d  CVn                vF,  cS,  iF,  N
 4888    - 13 01.1   -06  04  r  Vir                pF,  cS,  E,  psbM,  **  np;  =  4879?
I4057      13 01.1   +23  09  d  Com                vF,  vS,  R
I4063      13 01.1   +39  15  d  CVn                F,  S,  iF,  N
I4064      13 01.1   +39  50  d  CVn                pF,  S,  R,  bM;  spir?
I4058      13 01.2   +19  30  d  Com                cF,  vS,  R,  bM
I4065   Gx 13 01.2   +39  44  m  CVn    0.7   15.  p vF,  vS,  sbM  *
 4919   Gx 13 01.3   +27  48  s  Com    1.4   15.  p vF,  vS,  2nd  of  4
I4059      13 01.3   +19  16  d  Com                F,  vS,  iF,  N
I4067      13 01.3   +39  56  d  CVn                vF,  vS,  iF,  N
I4068      13 01.3   +39  54  d  CVn                vF,  vS,  iF,  N
 4903   Gx 13 01.4   -30  56  r  Cen          15.  p vF,  cS,  R,  *  att,  p  of  2
 4910    - 13 01.4   +01  40  r  Vir                eF,  vL,  rr
 4921   Gx 13 01.4   +27  53  s  Com    2.7   12.1   F,  pL,  3rd  of  4
 4922   Gx 13 01.4   +29  19  s  Com    2.1   14.  p pB,  S,  R,  lbM,  *11-12  f
I4069      13 01.4   +36  05  d  CVn                vF,  vS,  pR,  eFN
I4072      13 01.4   +37  21  d  CVn                eF,  S,  iF,  diffic
I4073      13 01.4   +39  55  d  CVn                F,  vS,  iF,  N
 4905   Gx 13 01.5   -30  52  r  Cen          15.  p vF,  vS,  R,  slbM,  f  of  2
 4915   Gx 13 01.5   -04  33  s  Vir    1.7   11.9   pB,  S,  R,  bM
 4923   Gx 13 01.5   +27  51  s  Com    1.3   13.6   vF,  4th  of  4
I3986   Gx 13 01.5   -32  17  c  Cen    2.0         eeF,  pS,  R,  *10  nf
I 843   Gx 13 01.6   +29  08  x  Com          15.  p F,  bMN
I4077      13 01.6   +37  23  d  CVn                F,  S,  R,  bM
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I4082      13 01.6   +37  20  d  CVn                F, S,  iF
I4083      13 01.6   +38  09  d  CVn                F, vS, iF, neb*
I4085      13 01.6   +39  42  d  CVn                vF, vS, R,  bM
I4066      13 01.7   +19  16  d  Com                vF, vS, iF
I4070      13 01.7   +19  18  d  Com                F, S, iF,  N
I4078   Gx 13 01.7   +36  38  u  CVn    1.0   16.  p pF, vS, iF,  N
I4084      13 01.7   +36  58  d  CVn                pF, vS, R,  bM
I4086   Gx 13 01.7   +36  38  u  CVn    1.0   16.  p F, pS, iF,  N,  *15  n
 4918   Gx 13 01.8   -04  30  r  Vir                eF, eS, R,  bMN,  4915  sp  4'
I4074      13 01.8   +19  00  d  Com                F, S, iF,  N
I4075      13 01.8   +19  58  d  Com                F, vS, bM,  spir
I4076      13 01.8   +23  23  d  Com                F, vS, iF,  N,  Cl?;  *15  np
I4088   Gx 13 01.8   +29  03  x  Com          15.   p eF,  susp;  *11  or  12  f  1'.4
I4090      13 01.8   +36  50  d  CVn                vF, S, iF,  N
 4920   Gx 13 01.9   -11  22  r  Vir          14.   p vF
 4926   Gx 13 01.9   +27  37  s  Com    1.4   12.9   pB, S, R,  glbM
I4079      13 01.9   +19  15  d  Com                vF, vS, att  to  IC  4080
I4081      13 01.9   +22  46  d  Com                F, vS, R,  bM
 4909   Gx 13 02.0   -42  46  r  Cen                eF, 3 or 4 st 11-12 f
 4927   Gx 13 02.0   +28  00  s  Com          15.   p vF
I4071   Gx 13 02.0   -07  35  m  Vir    0.5   15.  p eeF,  eS,  cE  10deg
I4080      13 02.0   +19  15  d  Com                F, vS, *14  p 0'.3,  *15  sf
I4087      13 02.0   +20  00  d  Com                vF, vS, bM;  spir?
I4094      13 02.0   +37  48  d  CVn                F, vS, iF,  N
I4100   Gx 13 02.0   +40  25  u  CVn    1.5   15.  p pF,  cS,  iF,  3  wings
 4925   Gx 13 02.1   -07  42  r  Vir          14.   p cF,  S
I4089      13 02.1   +19  30  d  Com                eF, S, iF,  N,  bet  2  st  14
I4093      13 02.1   +29  00  d  Com                susp,  close  p  *8
I4097      13 02.1   +36  36  d  CVn                pF, vS, iF,  N
I4098      13 02.1   +37  59  d  CVn                F, vS, R,  bM
 4924   Gx 13 02.2   -14  58  s  Vir    0.7   14.  p cF,  L,  vlE  45deg  +/-
 4954   Gx 13 02.2   +75  24  r  Dra          14.   p vF,  S,  R,  vgbM
I4091      13 02.2   +19  54  d  Com                vF, vS, iF,  N
I4092      13 02.2   +19  11  d  Com                vF, S, iF,  N
I4101      13 02.2   +39  56  d  CVn                vF, vS, iF,  N
I4095      13 02.3   +19  06  d  Com                F, S, iF,  N
I4096      13 02.3   +24  01  d  Com                F, S, iF,  N
I4102      13 02.3   +36  09  d  CVn                F, vS, R,  sbM  *
I4104      13 02.3   +38  35  d  CVn                F, S, iF,  N
I4105      13 02.3   +38  16  d  CVn                vF, vS, iF,  neb*
I4099      13 02.4   +24  05  d  Com                vF, vS, iF,  N
I4103   Gx 13 02.4   +38  02  m  CVn    0.7   15.  p F, vS, iF,  N
I4108      13 02.5   +38  29  d  CVn                F, vS, iF,  N
 4932   Gx 13 02.6   +50  27  r  CVn          14.   p cF,  S,  R,  vglbM
I4106   Gx 13 02.6   +28  07  x  Com          15.   p eF,  pS,  dif
 4929   Gx 13 02.7   +28  03  s  Com    1.5   15.  p F, S,  *16  close  p
I4107      13 02.7   +22  00  d  Com                eF, cL,  dif
I4112      13 02.7   +37  13  d  CVn                F, S, iF,  N,  diffic
I4114      13 02.7   +40  06  d  CVn                vF, S, viF,  N
I4115      13 02.8   +37  13  d  CVn                F, pL, iF,  N
I4117      13 02.8   +40  32  d  CVn                vF, S, iF,  neb*
I4111   Gx 13 02.9   +28  04  x  Com          16.   p eF
I4118      13 02.9   +38  18  d  CVn                F, vS, R,  bM
 4928   Gx 13 03.0   -08  05  s  Vir    1.3   13.  p F, pS,  vlE,  glbM
 4931   Gx 13 03.0   +28  02  s  Com    2.0   13.5   F, S
 4938   Gx 13 03.0   +51  20  r  CVn          15.   p eF,  R,  psbM
I4109      13 03.0   +19  00  d  Com                vF, S, iF
I4110      13 03.0   +19  14  d  Com                eF, vS, R,  *13  p
I4120      13 03.0   +37  05  d  CVn                cF, vS, iF,  N
I4113      13 03.1   +20  28  d  Com                vF, vS, iF,  N
I4123      13 03.1   +38  19  d  CVn                F, S, fan,  Ns
I4116      13 03.2   +19  05  d  Com                F, S, R
 4934   Gx 13 03.3   +28  01  r  Com          15.   p F, S,  lE
 4935   Gx 13 03.3   +14  23  r  Com          14.   p vF,  vS,  R,  3  st  f
I 844   Gx 13 03.3   -30  31  c  Cen    1.3         vF, vS, lbM
I4119      13 03.3   +19  14  d  Com                eF, S, E  30deg  ; ?
I4127   Gx 13 03.3   +38  04  m  CVn    0.4   15.  p F, vS,  iF,  neb*
I4121      13 03.4   +19  17  d  Com                vF, vS, iF  N
I4122   Gx 13 03.4   +20  11  z  Com          15.   p cF,  S,  bM,  spir,  *15  p  20"
I4131      13 03.4   +38  57  d  CVn                F, cS, iF,  N
I4124      13 03.5   +22  51  d  Com                vF, vS, E  110deg  , bM
I4125      13 03.6   +18  48  d  Com                F, S, iF,  N
I4126      13 03.6   +19  19  d  Com                eF, vS, iF,  N
I4132      13 03.6   +38  23  d  CVn                F, vS, R,  bM
I4135   Gx 13 03.6   +40  15  u  CVn    1.0   16.  p vF,  cS,  iF,  N
I4128      13 03.7   +20  13  d  Com                F, S, bM,  spir
I4129      13 03.7   +18  53  d  Com                vF, S, iF
 4943   Gx 13 03.8   +28  05  r  Com          15.   p vF,  vS
 4944   Gx 13 03.8   +28  11  s  Com    1.9   13.  p F, S, R,  bM,  *9  nf  1'
I4130      13 03.8   +19  16  d  Com                cF, S, R
I4133   Gx 13 03.8   +27  59  x  Com          15.   p vF,  vS,  mbM
I4142      13 03.8   +38  12  d  CVn                vF, vS, iF,  N
I4143      13 03.8   +40  12  d  CVn                F, S, iF
I4145      13 03.8   +38  17  d  CVn                vF, S, iF
 4933   Gx 13 03.9   -11  29  s  Vir    2.5   13.  p pB,  pL,  iR
I4144   Gx 13 03.9   +36  57  u  CVn    1.1   16.  p F, cS,  iF
I4137      13 04.0   +22  44  d  Com                cF, vS, iF,  N
I4138      13 04.0   +20  40  d  Com                F, vS, iF,  N,  *16  inv  np;  D*?
I4149   Gx 13 04.0   +22  16  m  Com    0.4   15.  p pF,  vS,  iF,  N,  *9  p  2',  *15  sf
I4151      13 04.0   +36  51  d  CVn                vF, cS, iF
I4152      13 04.0   +38  12  d  CVn                F, vS, iF,  N
 4930   Gx 13 04.1   -41  25  t  Cen    3.6         vF, R, triangle  2 st 8,  9,  f
I4139      13 04.1   +19  18  d  Com                F, S, iF,  N,  2  st  nf
I4140      13 04.1   +20  06  d  Com                vF, vS, R;  ?
I4141      13 04.1   +19  13  d  Com                F, S, iF,  N
 4939   Gx 13 04.2   -10  20  s  Vir    5.8   11.  p pB,  L,  R,  gmbM
 4941   Gx 13 04.2   -05  33  s  Vir    3.7   11.1   pF, L, E,  gbM8N,  r
 4949   Gx 13 04.2   +29  02  r  Com                eF, S
 4972    - 13 04.2   +75  18  r  UMi                vF, S, iR,  bM
I4146      13 04.2   +19  17  d  Com                F, vS, R,  bM
I4147      13 04.2   +20  15  d  Com                vF, S, dif
I4148      13 04.2   +19  15  d  Com                eF, vS, R
I4150      13 04.2   +21  59  d  Com                vF, vS, R
I4155      13 04.2   +40  01  d  CVn                vF, S, iF,  dif
 4936   Gx 13 04.3   -30  32  s  Cen    1.9   11.3   pB, S, R,  bM,  *  f  6s
 4942   Gx 13 04.3   -07  39  s  Vir    1.8   14.  p vF,  S
I4157      13 04.3   +38  40  d  CVn                eF, pL, iF;  biN?
I4134      13 04.4   -11  27  d  Vir                vF, S, mbM
I4136    ? 13 04.4   -05  58  x  Vir                eeF,  cS
I4153      13 04.4   +19  03  d  Com                F, S, R,  bM
I4158      13 04.4   +36  29  d  CVn                F, S, iF,  N
I4154      13 04.5   +23  34  d  Com                pF, S, R
I4161      13 04.6   +39  59  d  CVn                F, vS, iF,  N
 4937    - 13 04.7   -47  13  r  Cen                eeF, S, R,  p  of  2
I4159      13 04.8   +22  15  d  Com                F, vS, iF,  N
I4160      13 04.8   +22  54  d  Com                vF, S, iF,  dif
 4940   Gx 13 04.9   -47  16  r  Cen                F, S, R,  f  of  2
 4948   Gx 13 04.9   -07  57  s  Vir    1.8   14.  p eeF,  pS,  lE,  4958  f
 4952   Gx 13 05.0   +29  08  s  Com    1.6   14.  p F, S,  R,  psbM  *11
I4156    ? 13 05.0   -06  16  x  Vir                eeF,  cS,  mE  140deg
I4165      13 05.0   +39  55  d  CVn                F, cS, p  dif
 4951   Gx 13 05.1   -06  30  s  Vir    3.3   12.  p F, pL,  lE,  r
 4956   Gx 13 05.1   +35  11  r  CVn          13.   p pB,  cS,  R,  smbM
I4162      13 05.1   +20  33  d  Com                vF, S, iF,  N,  *14  sp
I4163      13 05.1   +20  46  d  Com                F, vS, bM;  spir?
 4957   Gx 13 05.2   +27  34  s  Com    1.3   12.9   F, S, R
I4164   OC 13 05.2   +20  33  x  Com                vF, S, neb  Cl?;  *14  n
I4168      13 05.2   +40  13  d  CVn                F, vS, R,  bM,  *13  sp
I4169      13 05.2   +38  46  d  CVn                vF, S, iF,  N
I 845      13 05.3   +12  07  d  Vir                eeF, S, R,  F*  nr  p;  decl  uncertain
I 846   Gx 13 05.3   +23  06  z  Com          15.   p vF,  R,  lbM,  diffic

I3974   Gx 13 05.3   -35  20  c  Cen    2.1         eeF,  pS,  lE;  = 4947
 4945   Gx 13 05.4   -49  28  s  Cen   20.0    9.  p B,  vL,  vmE  39deg
 4946   Gx 13 05.4   -43  36  r  Cen                B,  pS,  R,  gpmbM,  p  of  2
 4947   Gx 13 05.4   -35  20  s  Cen    2.8   12.  p F,  pL,  R,  vglbM
 4964   Gx 13 05.4   +56  18  r  UMa          13.   p eF,  S,  lE
I4166   Gx 13 05.4   +31  27  u  CVn    1.0   15.  p F,  S,  dif
I4171   Gx 13 05.4   +36  07  u  CVn    1.0   16.  p F,  cS,  E  60deg  , bM
 4950   Gx 13 05.5   -43  31  r  Cen                eF,  S,  R,  pslbM,  f  of  2
 4973      13 05.5   +53  41  D  UMa                vF,  S
I4167      13 05.5   +21  55  d  Com                vF,  vS,  iF,  N
I4174      13 05.5   +36  24  d  CVn                vF,  S,  iF,  N
I4170      13 05.6   +21  08  d  Com                F,  vS,  iF,  N
I4172      13 05.6   +22  51  d  Com                F,  S,  R,  bM
 4959   Gx 13 05.7   +33  11  r  CVn          15.   p eF,  S,  R
 4967   Gx 13 05.7   +53  34  r  UMa          15.   p vF,  S,  E,  *  att
I4178   Gx 13 05.7   +36  00  u  CVn    1.2   16.  p vF,  cS,  R,  bM,  dif
 4958   Gx 13 05.8   -08  01  s  Vir    4.1   10.5   vB,  pS,  E,  bM8N
 4960   Gx 13 05.8   +27  33  r  Com                F,  S,  R,  N  =  *16
 4961   Gx 13 05.8   +27  44  s  Com    1.7   13.5   F,  S,  iF
 4963   Gx 13 05.8   +41  43  r  CVn          14.   p F,  vS,  R,  stell,  vS*  s
I4175      13 05.8   +20  22  d  Com                vF,  S,  R
I4179      13 05.8   +37  12  d  CVn                F,  vS,  iF,  N,  *14  p
I4182   Gx 13 05.8   +37  36  s  CVn    6.7   13.  p cF,  vL,  iF,  N
 4962    - 13 05.9   +29  04  r  Com                eF,  vS
 4974      13 05.9   +53  40  D  UMa                vF,  S;  = IC  847
I4184      13 05.9   +38  50  d  CVn                pF,  S,  iF,  N
I4190   Gx 13 05.9   +37  37  m  CVn    5.0   13.  p vF,  cS,  iF,  diffic
I 847      13 06.0   +53  41  x  UMa                vF,  S,  R,  bet  2  st;  = 4974
I4186      13 06.0   +36  59  d  CVn                F,  S,  iF,  N
I4187      13 06.0   +36  18  d  CVn                F,  S,  iF,  N,  D*  s
I4188      13 06.0   +36  20  d  CVn                vF,  S,  iF,  cF  neb  p  1'
I4189   Gx 13 06.0   +35  58  v  CVn    1.6         pF,  pS,  E  60deg  , bM
 4953   Gx 13 06.1   -37  34  r  Cen                vF,  pS,  am  3  S  st
 4955   Gx 13 06.1   -29  45  r  Hya          15.   p F,  cS,  R,  gbM
I4181      13 06.1   +21  30  d  Com                cF,  vS,  R,  bM
I4192    ? 13 06.1   +37  36  x  CVn                vF,  S,  iF,  v  diffic
I4193   Gx 13 06.1   +39  26  z  CVn          16.   p pF,  S,  iF,  N,  eF*  att  np
I4194      13 06.1   +38  52  d  CVn                F,  S,  iF,  N
 4977   Gx 13 06.2   +55  39  r  UMa          14.   p cF,  S
I4173      13 06.2   -11  34  d  Vir                neb  *13,  sp  of  2
I4183      13 06.2   +21  30  d  Com                F,  vS,  iF,  N
I4185      13 06.2   +21  47  d  Com                vF,  S,  iF,  att  *15  n
 4966   Gx 13 06.3   +29  04  s  Com    1.2   14.  p vF,  vS,  vlE,  vglbM,  **  sp
I4176      13 06.3   -11  33  d  Vir                pF,  pS,  bM,  nf  of  2
I4177   Gx 13 06.3   -13  35  m  Vir    0.8   15.  p vF,  vS,  R,  susp
I4195      13 06.3   +37  02  d  CVn                vF,  S,  iF
 4971   Gx 13 06.9   +28  32  s  Com    1.3   15.  p F,  vS,  lE,  **  nr  n
I4180   Gx 13 06.9   -23  55  c  Hya    1.5         eeF,  eS,  R,  1st  of  3
 4969   Gx 13 07.0   +13  39  r  Vir          15.   p eeF,  S,  R,  v  diffic
I 848   Gx 13 07.0   +16  02  m  Com    0.8   15.  p eF,  vS,  diffic
 4968   Gx 13 07.1   -23  41  r  Hya          14.   p F,  pL,  R,  glbM
 4965   Gx 13 07.2   -28  14  s  Hya    2.6   14.  p vF,  vL,  cE,  vgbM
 4970   Gx 13 07.5   -24  02  r  Hya          14.   p vF,  pL,  iF
I4199      13 07.5   +35  51  d  CVn                F,  S,  iF,  N
 4979   Gx 13 07.6   +24  49  r  Com          15.   p eF,  pL,  lE;  =  IC  4198?
I 849   Gx 13 07.6   -00  56  u  Vir    1.2   14.  p F,  pL,  R,  gbM
I 852   Gx 13 07.6   +60  09  u  UMa    1.1   15.  p vF,  pS,  R,  B*  p
I4196   Gx 13 07.6   -24  01  c  Hya    2.0         eeF,  eS,  R,  *11  p  4';  2nd  of  3;  =  4970
I4198   Gx 13 07.7   +24  49  u  Com    1.1   15.  p F,  cS,  R,  4979  nr
 4978   Gx 13 07.8   +18  25  r  Com          14.   p F,  vS,  R,  sbM,  stellar
I 850   Gx 13 07.8   -00  51  v  Vir    0.8         vF,  S,  R
I4201   Gx 13 07.8   +35  50  m  CVn    0.4   15.  p F,  S,  iF,  N
 4975   Gx 13 08.0   -05  01  v  Vir    0.5         vF,  vS,  R,  psbM
 4987   Gx 13 08.0   +51  56  r  CVn          14.   p vF,  vS,  stellar
 4985   Gx 13 08.1   +41  41  r  CVn          15.   p vF,  vS,  R,  lbM
I4197   Gx 13 08.1   -23  48  c  Hya    1.7         eeF,  eS,  R,  3rd  of  3,  *8  f  37s
 4998   Gx 13 08.2   +50  40  r  CVn          15.   p vF
I4203      13 08.3   +40  26  d  CVn                eF,  S,  dif
 4983   Gx 13 08.4   +28  19  r  Com          15.   p vF
 4986   Gx 13 08.4   +35  12  r  CVn          14.   p vF,  S,  R,  stellar
I4202   Gx 13 08.4   +24  42  u  Com    1.8   15.  p F,  cS,  E,  gbM
I4204   Gx 13 08.4   +39  27  u  CVn    1.5   16.  p F,  cS;  spir?
I 851   Gx 13 08.5   +21  02  m  Com    1.0   15.  p vF
 4976   Gx 13 08.6   -49  30  s  Cen    4.3   10.2   B,  pL,  R,  gmbM
 5003   Gx 13 08.6   +43  44  A  CVn          15.   p vF,  pS,  lbM
I 853   Gx 13 08.6   +52  46  v  UMa    1.3         eeF,  pS,  R
I4205      13 08.7   +52  52  d  UMa                vF,  pL,  R  (=  IC  853?)
 4981   Gx 13 08.8   -06  47  s  Vir    2.8   12.  p B,  pL,  R,  *10  1'  sf
 4982  Ast 13 08.8   -10  35  F  Vir                vF,  S
I4191   Pl 13 08.8   -67  39  s  Hus    0.1   12.  p PN  , stellar
 4984   Gx 13 09.0   -15  31  s  Vir    2.8   12.  p B,  pL,  R,  psmbM
 4992   Gx 13 09.0   +11  38  r  Vir          14.   p vF,  S,  lE,  2  S  st  s
 4980   Gx 13 09.2   -28  38  s  Hya    2.2   15.  p eF,  cS,  R
 4991   Gx 13 09.3   +02  21  r  Vir          15.   p vF,  vS
 5007   Gx 13 09.3   +62  10  r  UMa          14.   p vF,  vS
 4989   Gx 13 09.4   -05  25  r  Vir          14.   p pB,  S,  R,  *4  sf
 4990   Gx 13 09.4   -05  16  r  Vir          15.   p vF,  vS
I4206      13 09.4   +39  01  d  CVn                pF,  S,  iF,  N
I4207      13 09.5   +37  49  d  CVn                vF,  cS,  iF
 4996   Gx 13 09.6   +00  53  r  Vir          14.   p pB,  S,  R,  bM
 4999   Gx 13 09.6   +01  40  s  Vir    2.6   13.  p cF,  pL,  R,  lbM,  er
 5001   Gx 13 09.6   +53  29  r  UMa          14.   p pF,  S,  iR,  gbM
I4200   Gx 13 09.6   -51  58  c  Cen    1.4         F,  bM,  mag  14.5
I4208      13 09.6   +37  15  d  CVn                F,  cS,  bM,  spir
 4993   Gx 13 09.7   -23  24  r  Hya          14.   p vF,  vS
 4995   Gx 13 09.7   -07  50  s  Vir    2.5   11.0   pB,  pL,  R,  vgpmbM,  *8  np
 4988   Gx 13 09.8   -43  06  r  Cen                vF,  S,  E,  r
 4994   Gx 13 09.8   -23  23  c  Hya                pF,  cS,  R,  slbM,  am  st;  =  4993
 5000   Gx 13 09.8   +28  54  s  Com    1.9   14.  p cF,  pS,  lE
I 854   Gx 13 09.8   +24  35  m  Com    0.6   15.  p pF,  vS,  R,  vlbM
 4997   Gx 13 10.0   -16  30  r  Vir          13.   p no  description,  *6.5  2'  p
I4209   Gx 13 10.4   -07  10  v  Vir    1.6         eF,  cS,  cE  100deg
I 855      13 10.6   -04  29  d  Vir                F,  S,  *13.5  sp
 5002   Gx 13 10.7   +36  37  r  CVn          14.   p vF,  pL,  E,  *13  att  n
I 856      13 10.7   +20  32  d  Com                F,  E,  lbM
 5009   Gx 13 10.8   +50  05  r  CVn          15.   p vF,  R,  bet  2  vS  st
I4210   Nb 13 10.8   +29  42  x  Com    1.                eF,  S,  dif
 5005   Gx 13 10.9   +37  03  s  CVn    5.4    9.8   vB,  vL,  vmE  66deg  , vsbMN
I4211    * 13 10.9   +37  11  x  CVn                cF,  S,  E  315deg  , bM
 5004   Gx 13 11.1   +29  38  s  Com    1.9   14.  p vF,  vS,  vlE
 5008    - 13 11.3   +25  23  r  Com                pF,  pL,  R
 5014   Gx 13 11.5   +36  17  s  CVn    1.7   13.  p pF,  S,  E,  psbM
 5012   Gx 13 11.6   +22  55  s  Com    2.9   13.  p pF,  cL,  E  17deg  , biN,  *9  f
 5006   Gx 13 11.8   -19  14  r  Vir          14.   p F*  close  p
 5016   Gx 13 12.1   +24  06  s  Com    1.9   14.  p pB,  S
 5021   Gx 13 12.1   +46  12  r  CVn          14.   p pF,  cS,  R,  *12  nf  90"
I4212      13 12.1   -06  59  F  Vir                eF,  cS,  cE  20deg
I4213   Gx 13 12.1   +35  40  s  CVn    2.6   14.  p F,  L,  vmE  ns,  gvlbM
 5013   Gx 13 12.2   +03  12  r  Vir          15.   p vF,  vS
 5023   Gx 13 12.2   +44  02  s  CVn    6.5   12.  p pF,  L,  mE  20deg  , vlbM
 5034   Gx 13 12.2   +70  39  r  UMi          14.   p vF,  vS,  R
 5015   Gx 13 12.4   -04  19  s  Vir    1.9   13.  p eF,  eS,  cE  55deg
 5010   Gx 13 12.5   -15  47  r  Vir          14.   p vF,  R,  bM,  *10  np  5'
 5020   Gx 13 12.6   +12  36  r  Vir          13.   p cF,  cL,  vlE,  lbM
 5029   Gx 13 12.6   +47  04  r  CVn          14.   p F,  vS,  R,  gbM
 5019   Gx 13 12.8   +04  44  r  Vir          14.   p eF,  vS,  R,  er
 5025   Gx 13 12.8   +31  48  r  CVn          14.   p vF,  S,  lE,  *13  n
 5011   Gx 13 12.9   -43  06  s  Cen    2.0   13.  p pB,  cS,  R,  am  4  st
 5017   Gx 13 12.9   -16  46  s  Vir    1.7   13.  p vF,  R,  bM
 5024   Gb 13 12.9   +18  10  s  Com   12.6    7.7   !,  glob.  cl.  ,  B,  vC,  iR,  vvmbM,  st  12;  =
    M53
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 5018   Gx 13 13.0   -19 31 s  Vir    2.6   10.8   cB,  S,  R,  mbMpBN
 5027   Gx 13 13.4   +06  04 r  Vir          15.  p vF,  S,  R,  pgbM
 5032   Gx 13 13.4   +27  48 r  Com          13.  p vF,  pL,  iR
 5033   Gx 13 13.4   +36  36 s  CVn   10.5   10.1   vB,  pL,  E 167deg  , smbMvBN,  * np
 5022   Gx 13 13.5   -19  33 s  Vir    2.5   13.  p vF,  pL,  E 30deg  , gbM,  f 5018,  F* close  p
 5040   Gx 13 13.6   +51  16 r  CVn          15.  p F,  S,  iR,  vgmbM
 5028   Gx 13 13.8   -13  03 s  Vir    1.7   14.  p vF,  S,  *11- 12  p
I 857       13 13.8   +17  05 d  Com                pF,  vS,  R,  gvlbM
 5030   Gx 13 13.9   -16  30 s  Vir    1.9   14.  p vF,  S
 5031   Gx 13 14.1   -16  06 r  Vir          14.  p vF,  stellar
 5026   Gx 13 14.2   -42  58 s  Cen    2.3   13.  p pB,  pL,  R,  gbM,  *7  nf
 5041   Gx 13 14.6   +30  42 r  Com          14.  p F,  S,  R
 5036   Gx 13 14.7   -04  11 r  Vir                eF,  vS,  R,  gbM,  1st  of  2
 5035   Gx 13 14.8   -16  30 s  Vir    1.6   14.  p F,  S,  R,  bMN
 5039   Gx 13 14.9   -04  10 r  Vir                eF,  eS,  E 45deg  , 2nd  of  2
I 858   Gx 13 14.9   +17  13 u  Com    1.7   15.  p F,  vS,  R,  stellar,  N = 12m
 5037   Gx 13 15.0   -16  35 s  Vir    2.5   13.  p cF,  pS,  vlE,  bM
I 859   Gx 13 15.0   +17  13 z  Com          15.  p pF,  R,  N = 14m
 5038   Gx 13 15.1   -15  56 r  Vir          14.  p pB,  E 90deg  , stellar
I 860   Gx 13 15.1   +24  36 m  Com    0.5   15.  p F,  vS,  R,  N = 12m
I 861   Gx 13 15.1   +34  19 u  CVn    1.1   16.  p F,  vS,  R,  sbM
 5044   Gx 13 15.4   -16  23 s  Vir    2.6   11.0   pB,  pL,  R,  bM
 5042   Gx 13 15.5   -23  59 s  Hya    4.2   13.  p F,  L,  R,  vgvlbM,  *9  p
 5052   Gx 13 15.6   +29  39 r  Com          14.  p vF
 5046   Gx 13 15.8   -16  20 s  Vir    1.2   15.  p F,  vS,  R,  stellar  Nucl
 5047   Gx 13 15.8   -16  31 s  Vir    3.0   13.  p vF
 5050   Gx 13 15.8   +02  52 r  Vir          14.  p F,  vS,  stell
 5055   Gx 13 15.8   +42  02 s  CVn   12.3    8.6   vB,  L,  pmE  120deg  +/-  , vsmbMBN;  = M63
 5049   Gx 13 16.0   -16  24 s  Vir    2.1   12.9   cF,  S
 5048   Gx 13 16.1   -28  23 r  Hya          15.  p pF,  R,  sp  of  2
 5056   Gx 13 16.2   +30  56 r  Com          13.  p cF,  cS,  R,  sp  of  2
I 862   Gx 13 16.2   +20  02 k  Com    0.3   15.  p pB,  eS,  R,  N = 12m
I4215   Gx 13 16.2   +25  24 u  Com    1.8   15.  p F,  S,  E 210deg
 5051   Gx 13 16.3   -28  17 c  Hya    1.4          neb,  nf  of  2
 5053   Gb 13 16.4   +17  42 s  Com   10.5    9.8   Cl,  vF,  pL,  iR,  vgbM,  st  15
 5057   Gx 13 16.5   +31  01 r  Com          14.  p cF,  cS,  R,  nf  of  2
 5043    - 13 16.7   -60  04 r  Cen                Cl,  P,  E,  sc  st  11
 5058   Gx 13 16.8   +12  33 r  Vir          14.  p vvF
 5045    - 13 17.0   -63  25 r  Cen                Cl,  vL,  vRi,  st  11
 5054   Gx 13 17.0   -16  38 s  Vir    5.0   11.  p F,  pS,  iR
 5059   Gx 13 17.0   +07  50 r  Vir          15.  p eF,  S,  lE
I4216   Gx 13 17.0   -10  46 m  Vir    1.8   13.  p vF,  cL,  cE  40deg
I 875   Gx 13 17.1   +57  32 s  UMa    1.9   13.  p eF,  S,  R,  stellar
I4218   Gx 13 17.1   -02  16 u  Vir    1.4   14.  p eF,  eS,  cE  170deg  ;  susp
I 863   Gx 13 17.2   -17  16 c  Vir    2.4          F,  S,  iF,  biN
I 864   Gx 13 17.2   +20  42 u  Com    1.1   16.  p vF,  pS,  R,  bMSN
I 866   Gx 13 17.2   +20  42 u  Com    1.1   16.  p vF,  S,  R,  lbM
I 867   Gx 13 17.2   +20  39 u  Com    1.5   15.  p vF,  R,  lbM
I4217   Gx 13 17.2   -13  09 m  Vir    0.6   15.  p eF,  eS,  R
 5060   Gx 13 17.3   +06  02 r  Vir          14.  p F,  S,  lE
I 868   Gx 13 17.4   +20  36 z  Com          15.  p vF,  R,  lbM
I 869       13 17.5   +20  41 d  Com                vF,  S,  R,  lbM
I 870       13 17.5   +20  36 d  Com                vF,  S,  R,  lbM
 5065   Gx 13 17.6   +31  04 r  Com          14.  p vF,  cS
I 865       13 17.6   -05  50 d  Vir                F,  vS,  R,  stellar
I4214   Gx 13 17.7   -32  06 c  Cen    2.4          pB,  pS,  R,  *9  sf
I 871   Gx 13 17.9   +04  24 u  Vir    2.1   15.  p pB,  pS,  E  pf,  dif
I4220   Gx 13 17.9   -13  36 m  Vir    0.7   14.  p eF,  eS,  cE  130deg
 5061   Gx 13 18.1   -26  50 s  Hya    2.6   12.  p vB,  S,  R,  vsmbM,  *10  f
I 872       13 18.2   +06  21 d  Vir                eeF,  pS,  R,  lbM
I 873   Gx 13 18.3   +04  28 z  Vir          15.  p F,  vS,  R,  bMN  = 13.5m
 5062   Gx 13 18.4   -35  26 r  Cen                eF,  vS,  E,  r
 5063   Gx 13 18.4   -35  20 r  Cen                eF,  vS,  R,  *  nr
 5066   Gx 13 18.4   -10  14 r  Vir          14.  p vF,  vS
 5067   D* 13 18.4   -10  08 F  Vir                vF,  vS
 5074   Gx 13 18.4   +31  28 s  CVn    1.0   14.0   eF,  vS
I 876   Gx 13 18.5   +04  29 m  Vir    0.6   15.  p F,  pL,  dif
I4219   Gx 13 18.5   -31  38 c  Cen    1.0          eeF,  pL,  R,  *9  sp
I4221   Gx 13 18.5   -14  36 m  Vir    1.1   13.  p cF,  S,  mE  165deg  , cbM
 5069    - 13 18.7   -10  12 r  Vir                eF,  vS;  = 5066?
 5071   Gx 13 18.7   +07  56 r  Vir          15.  p eF,  eS,  stell
 5068   Gx 13 18.9   -21  02 s  Vir    6.9   11.  p F,  L,  iR,  bM
I4223   Gx 13 18.9   +07  47 z  Vir          15.  p eF,  S,  r
 5064   Gx 13 19.0   -47  55 s  Cen    2.8   13.  p B,  S,  R,  pslbM
 5083   Gx 13 19.0   +39  36 r  CVn          15.  p pF,  pL,  R
I 874   Gx 13 19.0   -27  38 c  Hya    1.2          vF,  S,  R,  dif
I 877       13 19.0   +06  05 d  Vir                eeF,  pS,  pB*  f  13s
I 878       13 19.0   +06  07 d  Vir                eeF,  pL,  v  diffic
 5072   Gx 13 19.1   -12  32 r  Vir          14.  p F,  S,  *14  nf
I 880       13 19.1   +06  07 d  Vir                eeF,  pS,  E  ns,  pB*  s,  5th  of  5
I4224   Gx 13 19.1   -02  31 m  Vir    0.8   15.  p eF,  S,  cE  110deg  , susp
 5070   Gx 13 19.2   -12  29 r  Vir          15.  p eeF,  eS,  vF*  nr,  5072  nr
 5075   Gx 13 19.2   +07  49 r  Vir          15.  p vF,  eS,  stell
 5081   Gx 13 19.2   +28  30 r  Com          14.  p pF,  S,  iR,  *7- 8  np
 5073   Gx 13 19.4   -14  52 s  Vir    3.5   13.  p vF,  pL,  pmE  135deg  +/-
 5076   Gx 13 19.4   -12  45 r  Vir          13.  p vF,  cS,  R,  1st  of  3
 5080   Gx 13 19.4   +08  25 r  Vir          14.  p F,  S,  *7  nf
 5077   Gx 13 19.5   -12  39 s  Vir    2.0   11.5   pB,  S,  vlE,  sbM,  2nd  of  3
I4222       13 19.5   -28  26 d  Hya                eeF,  eS,  R
 5079   Gx 13 19.6   -12  42 s  Vir    1.7   12.  p cF,  pS,  vlE,  3rd  of  3
 5089   Gx 13 19.6   +30  15 s  Com    2.1   14.  p pF,  pL,  gbM
 5093   Gx 13 19.6   +40  23 r  CVn          15.  p vF,  S,  R,  lbM
I 879   Gx 13 19.7   -27  26 c  Hya    1.3          eF,  pL,  iR,  dif
 5078   Gx 13 19.8   -27  24 s  Hya    3.2   12.  p pB,  pS,  cE,  psbM,  *7- 8  f
 5092   Gx 13 19.9   +23  00 r  Com          14.  p pB,  pL,  iR,  *17  s
I 881   Gx 13 20.0   +15  51 u  Com    1.7   15.  p F,  vS,  R,  stellar
I4225   Gx 13 20.0   +31  58 u  CVn    1.1   15.  p F,  cS,  R
 5096   Gx 13 20.2   +33  05 r  CVn          15.  p vF,  cS,  R,  bM,  sp  of  2
 5098   Gx 13 20.2   +33  09 s  CVn    0.9   15.  p vF,  S,  bet  2 st,  nf  of  2
I 882   Gx 13 20.2   +15  54 z  Com          15.  p pF,  vS,  R,  stellar
 5084   Gx 13 20.3   -21  50 s  Vir    4.8   12.  p cB,  cS,  vlE  90deg  +/-  , bf
 5085   Gx 13 20.3   -24  26 s  Hya    3.4   12.  p F,  L,  R,  vglbM
 5088   Gx 13 20.3   -12  34 s  Vir    2.7   13.  p pB,  pS,  R,  bM
 5087   Gx 13 20.4   -20  37 s  Vir    2.3   11.0   cF,  vS,  iF
 5103   Gx 13 20.5   +43  04 r  CVn          13.  p pB,  cS,  E
I4226       13 20.5   +32  00 d  CVn                F,  vS,  stell  N
 5095   Gx 13 20.6   -02  17 r  Vir          15.  p vF,  iR,  *11  sp
I 883   Gx 13 20.6   +34  08 v  CVn    1.7          F,  pS,  iR,  bM
 5094   Gx 13 20.7   -14  05 r  Vir          14.  p cF,  vS,  R,  gbM
 5082   Gx 13 20.9   -43  42 v  Cen    3.1          vF,  S,  R,  1st  of  4
 5097   Gx 13 20.9   -12  29 r  Vir                eF,  eS,  R,  stell,  nearly  bet  2 st
 5109   Gx 13 20.9   +57  39 s  UMa    1.9   14.  p cF,  S,  cE
I4227   Gx 13 20.9   +32  11 z  CVn          16.  p F,  S,  gbM,  r
 5090   Gx 13 21.1   -43  44 s  Cen    2.6   13.  p pB,  pL,  R,  3rd  of  4
 5100   Gx 13 21.1   +08  58 r  Vir          15.  p vF,  vS,  lbM
 5086   Gx 13 21.2   -43  46 r  Cen                eF,  vS,  R,  2nd  of  4
 5091   Gx 13 21.2   -43  44 s  Cen    2.2          cF,  S,  vlE,  4th  of  4
 5099   Gx 13 21.3   -13  04 r  Vir                eF,  eS,  R
 5104   Gx 13 21.4   +00  20 r  Vir          14.  p F,  S,  lE
 5107   Gx 13 21.4   +38  32 s  CVn    1.9   14.  p vF,  S,  cE  0deg  +/-
 5113   Gx 13 21.4   +57  42 r  UMa          15.  p cF,  S,  E  (perhaps  = 5109)
I4228   Gx 13 21.6   +25  31 z  Com          15.  p F,  S,  r
 5106    * 13 21.7   +08  29 r  Vir                vF,  vS;  decl  very  doubtful
 5101   Gx 13 21.8   -27  26 s  Hya    5.5   12.  p cB,  pS,  lE,  psbM  *
 5105   Gx 13 21.8   -13  13 s  Vir    2.6   13.  p eF,  pS,  lE
 5112   Gx 13 21.9   +38  44 s  CVn    3.9   12.  p F,  L,  iR,  vglbM
 5102   Gx 13 22.0   -36  38 s  Cen    9.3    9.7   vB,  pS,  R,  svmbM
I4230   Gx 13 22.1   +26  44 u  Com    1.1   15.  p F,  S,  R,  N
 5110   Gx 13 22.5   -13  05 r  Vir                eF,  pS,  R,  in  line  with  2 pB  st
I 885   Gx 13 22.6   +21  19 m  Com    0.8   15.  p vF,  pS,  R
I4229       13 22.6   -02  24 d  Vir                eF,  eS,  R,  susp
 5111   Gx 13 22.8   -12  58 r  Vir          13.  p cF,  cS,  iR,  glbM
 5115   Gx 13 22.9   +13  57 r  Vir          15.  p eeF,  S,  R,  * nf,  D* f 24s
 5116   Gx 13 22.9   +26  59 s  Com    2.2   14.  p pF,  pS,  pmE,  glbM,  r
 5144   Gx 13 22.9   +70  31 s  UNi    1.4   13.  p PN ?,  cB,  S,  R,  g,  slbM
I 884       13 22.9   -12  44 d  Vir                vF,  pS,  R
 5117   Gx 13 23.0   +28  19 s  CVn    2.3   14.  p vF,  L,  triangle  2 st  11  np
I4234   Gx 13 23.1   +27  07 m  Com    0.6   15.  p F,  cS,  R,  N,  r
 5108   Gx 13 23.2   -32  20 r  Cen          15.  p eeF,  p  of  2
 5123   Gx 13 23.2   +43  04 r  CVn          13.  p pF,  S,  R,  gmbM
I4231   Gx 13 23.2   -26  18 c  Hya    1.6          pL,  vmE
I4232   Gx 13 23.4   -26  07 c  Hya    1.1          bM,  mag  14
 5118   Gx 13 23.5   +06  23 r  Vir          14.  p vF,  S,  R,  gbM
I4236       13 23.6   +06  14 d  Vir                eeF,  pS,  mE,  v  diffic
 5127   Gx 13 23.8   +31  34 s  CVn    2.6   14.  p pB,  pL,  R,  gmbM,  **  p
 5119   Gx 13 23.9   -12  17 r  Vir          14.  p pB,  S,  lE
 5125   Gx 13 23.9   +09  42 r  Vir          13.  p pF,  S,  R,  gbM
I 886       13 23.9   -04  24 d  Vir                vF,  vS,  bMN,  v  diffic
I4235       13 23.9   -12  45 d  Vir                eF,  vS,  R
 5114   Gx 13 24.0   -32  21 r  Cen          14.  p F,  lE,  psbM,  f  of  2
 5131   Gx 13 24.0   +30  59 r  CVn          14.  p F,  pS,  lE,  N = *15
I4233       13 24.0   -30  19 d  Cen                eeF,  pS,  R,  4  st  sf
I4238       13 24.0   +30  56 d  CVn                F,  vS,  dif,  5131  np
 5122   Gx 13 24.1   -10  39 r  Vir          14.  p vF,  S,  R
 5129   Gx 13 24.1   +13  59 r  Vir          13.  p pB,  vS,  R,  gmbM,  **  f
I 887       13 24.2   -12  28 d  Vir                vF,  vS,  nearly  bet  2 st
 5130   Gx 13 24.3   -10  13 r  Vir          14.  p vF,  vS,  gbM
 5132   Gx 13 24.4   +14  05 r  Vir          14.  p vF,  r
I4239       13 24.4   +30  57 d  CVn                F,  cS,  dif
I4237   Gx 13 24.5   -21  08 c  Vir    2.1          vF,  S,  lbM,  r
I4240       13 24.5   +30  59 d  CVn                F,  vS,  dif
I4242       13 24.7   +31  01 d  CVn                F,  S,  R,  N
 5121   Gx 13 24.8   -37  41 s  Cen    2.3   12.  p cB,  S,  R,  psmbM,  r
 5124   Gx 13 24.8   -30  19 r  Cen          13.  p vF,  S,  vlE
 5136   Gx 13 24.8   +13  44 r  Vir          14.  p eF,  vS,  R,  psbM
 5137   Gx 13 24.8   +14  04 r  Vir          15.  p eeF,  pL,  v  diffic
I4241   Gx 13 24.8   +26  44 m  Com    0.5   15.  p F,  S,  iF,  *12.5  att
 5126   Gx 13 24.9   -30  20 r  Cen          14.  p vF,  vS
 5133   Gx 13 24.9   -04  02 r  Vir          15.  p vF,  vS,  irrR,  bM
 5141   Gx 13 24.9   +36  23 s  CVn    1.7   12.8   cF,  cS,  R,  vsmbM  *,  *12  sp,  sp  of  2
 5142   Gx 13 25.0   +36  24 s  CVn    1.1   13.3   F,  cS,  R,  vsmbM  *,  nf  of  2
 5143   Gx 13 25.0   +36  26 r  CVn          15.  p vF
I4244   Gx 13 25.0   +26  27 z  Com          16.  p F,  S,  R,  gbM
 5145   Gx 13 25.2   +43  15 s  CVn    2.3   13.  p pB,  vS,  vlE,  glbM
 5134   Gx 13 25.3   -21  08 s  Vir    2.8   12.  p F,  pS,  lE,  vgbM
 5128   Gx 13 25.5   -43  01 s  Cen   18.2    7.0   !!,  vB,  vL,  vmE  122deg  , bifid
 5135   Gx 13 25.7   -29  50 s  Hya    2.4   13.  p pB,  S,  E
I 888       13 25.8   +13  45 d  Vir                eeF,  pS,  R
I4243       13 25.9   -27  38 d  Hya                bM,  mag  14
 5120   OC 13 26.1   -63  25 o  Cen    3.    13.  p Cl,  eRi,  mC,  st  12...16
 5149   Gx 13 26.1   +35  56 r  CVn          14.  p cF,  pS,  E,  bM,  sp  of  2
I4245       13 26.1   -26  40 d  Hya                neb  0'.3  p  IC  4246
I4246       13 26.1   -26  40 d  Hya                neb  0'.3  f  IC  4245
 5140   Gx 13 26.3   -33  53 m  Cen    0.5   13.  p vF,  S,  R,  glbM
 5147   Gx 13 26.3   +02  06 s  Vir    1.8   11.8   pB,  pL,  vlE,  vsmbM  *12
I4250   Gx 13 26.3   +26  29 z  Com          15.  p F,  S,  dif
 5154   Gx 13 26.4   +36  00 r  CVn          15.  p vF,  pL,  R,  nf  of  2
 5146   Gx 13 26.5   -12  19 r  Vir          14.  p vF,  vS,  stellar
 5148   Gx 13 26.6   +02  19 v  Vir    1.1          eF,  S
 5151   Gx 13 26.6   +16  52 r  Com          15.  p vF,  S,  R,  *8  nf  4'
I 889   Gx 13 26.6   +11  52 z  Vir          15.  p F,  vS,  R,  N = 14m
I4247   Gx 13 26.7   -30  22 m  Cen    1.2   15.  p S,  E,  mag  14
 5139   Gb 13 26.8   -47  29 s  Cen   36.3    3.7   !!!,  glob.  cl.  ,  omega  Cen
I4248       13 26.8   -29  54 d  Hya                F,  spir,  *13  in  M
 5163   Gx 13 26.9   +52  45 r  UMa          15.  p cF,  stellar
I4256       13 27.0   +31  03 d  CVn                vF,  S,  R
 5164   Gx 13 27.2   +55  29 s  UMa    1.2   15.  p cF,  S,  iR
I4249   Gx 13 27.2   -27  56 m  Hya    0.4   14.  p vF,  bM,  mag  13,  nr  B*
 5138   OC 13 27.3   -59  01 s  Cen    8.     7.6   Cl,  Ri,  lC,  st  11
I4257       13 27.3   +46  52 d  CVn                eF,  S,  R,  dif
 5157   Gx 13 27.4   +32  01 r  CVn          14.  p F,  pS,  vlE,  bM,  p  of  2
I4251       13 27.4   -29  28 d  Hya                vF,  bM,  mag  14,  5150  sf
I4252   Gx 13 27.5   -27  19 c  Hya    1.5          bM,  mag  13.5
I4253   Gx 13 27.5   -27  52 c  Hya    1.4          bM;  spir?
 5150   Gx 13 27.6   -29  34 s  Hya    1.4   13.  p cF,  S,  R,  pslbM,  * f 2'
 5158   Gx 13 27.7   +17  46 r  Com          14.  p vF,  R
I4254       13 27.8   -27  14 d  Hya                bM,  dif,  mag  14.5
 5152   Gx 13 27.9   -29  37 r  Hya          14.  p vF,  S,  R,  p  of  Dneb
I4258       13 27.9   +28  23 d  CVn                F,  S,  gbMN
 5153   Gx 13 28.0   -29  37 r  Hya          14.  p pF,  S,  f  of  Dneb
I4255   Gx 13 28.0   -27  22 m  Hya    0.3   15.  p bM,  mag  13.5
 5169   Gx 13 28.2   +46  40 s  CVn    2.4   14.  p vF,  pS,  R
 5159   Gx 13 28.3   +02  59 r  Vir          15.  p eF,  S,  lE
 5160   D* 13 28.3   +05  59 r  Vir                pF  (vF  D*  with  F*  close?)
 5166   Gx 13 28.3   +32  01 r  CVn          14.  p pF,  pL,  lE,  lbM,  f  of  2
 5173   Gx 13 28.4   +46  36 s  CVn    1.3   13.  p F,  vS,  R,  stellar
I 890       13 28.4   -16  05 d  Vir                vF,  sbM  *13.5,  r
 5165   Gx 13 28.6   +11  23 r  Vir          14.  p F,  vS,  R,  *13  sf
 5167   Gx 13 28.6   +12  42 r  Vir          14.  p vF,  sev  vF  st  close
I4263   Gx 13 28.6   +46  56 v  CVn    2.0          eF,  pL,  mE,  mbM
 5156   Gx 13 28.7   -48  55 s  Cen    2.1   13.  p pB,  cS,  iE,  glbM,  r
 5162   Gx 13 29.1   +11  16 r  Vir          15.  p vF,  pL,  lE,  F*  nr  nf
I4266       13 29.1   +37  37 d  CVn                F,  S,  R,  N
 5161   Gx 13 29.2   -33  10 s  Cen    5.4   12.  p pF,  L,  vmE,  pgbM,  rr
 5201   Gx 13 29.2   +53  04 r  UMa          14.  p pF,  cS,  R,  vglbM
I4268       13 29.2   +37  40 d  CVn                F,  S,  R,  N
 5171   Gx 13 29.3   +11  44 r  Vir          14.  p pB,  L
 5172   Gx 13 29.3   +17  03 s  Com    3.3   11.9   F,  pL,  R,  gbM
 5174   Gx 13 29.3   +11  00 r  Vir          13.  p vF,  pL,  D  with  5175
 5175   Gx 13 29.3   +11  00 r  Vir          13.  p vF,  pL,  D  with  5174
 5176   Gx 13 29.3   +11  47 r  Vir          15.  p no  description
 5177   Gx 13 29.3   +11  48 r  Vir          15.  p no  description
 5178   Gx 13 29.4   +11  37 r  Vir          15.  p vF
 5179   Gx 13 29.4   +11  45 r  Vir          15.  p vF,  * in  centre
 5180   Gx 13 29.4   +16  49 r  Com          14.  p vF,  S,  R,  am  3  st,  *7  nf
I4269   Gx 13 29.4   +37  39 m  CVn    0.3   15.  p F,  S,  N
I4271   Gx 13 29.4   +37  26 m  CVn    0.7   15.  p F,  S,  R,  gbM,  r
I4259       13 29.5   -30  08 d  Hya                bM,  mag  14
I4260       13 29.5   -28  17 d  Hya                bM,  mag  14.5
 5155    - 13 29.6   -63  25 r  Cen                Cl,  vRi
 5181   Gx 13 29.6   +13  18 r  Vir          14.  p vF,  S,  R
 5204   Gx 13 29.6   +58  25 s  UMa    4.8   11.3   pB,  cL,  iR,  gmbM,  r
 5170   Gx 13 29.8   -17  58 s  Vir    8.1   12.  p cF,  L,  mE  129deg  , pgbM
 5187   Gx 13 29.9   +31  07 r  CVn          14.  p vF,  vS,  R,  glbM
 5194   Gx 13 29.9   +47  12 s  CVn   11.0    8.4   !!!,  great  spiral  neb  M51
 5205   Gx 13 29.9   +62  31 s  UMa    3.4   13.  p vF,  pS,  R,  bet  2  vF  st
I4261       13 29.9   -28  02 d  Hya                bM,  mag  14
 5185   Gx 13 30.0   +13  25 r  Vir          14.  p vF,  S,  iR
 5186   Gx 13 30.0   +12  10 r  Vir          15.  p no  description
 5195   Gx 13 30.0   +47  16 s  CVn    5.4    9.6   B,  pS,  lE,  vgbM,  inv  in  M51
I 891   Gx 13 30.0   +00  18 m  Vir    0.3   15.  p F,  S,  R,  N = 13m
 5183   Gx 13 30.1   -01  44 r  Vir          13.  p F,  cS,  lE,  gbM,  p  of  2
 5184   Gx 13 30.2   -01  41 r  Vir          13.  p pF,  pL,  iR,  bM,  f  of  2
 5198   Gx 13 30.2   +46  40 s  CVn    2.1   13.  p pF,  pS,  R,  mbM
I4262       13 30.3   -28  17 d  Hya                bM,  wisps  extend  0'.1
I4264   Gx 13 30.3   -27  56 c  Hya    1.8          bM,  mag  14.5
I4277       13 30.3   +47  19 d  CVn                eF,  S,  vmE,  nf  M51
I4265       13 30.4   -25  46 d  Hya                bM,  mag  14
I4278   Gx 13 30.4   +47  15 v  CVn                eF,  vS,  R,  bM,  f  M51
 5190   Gx 13 30.6   +18  08 r  Com          13.  p cF,  S,  R,  bM,  ***  f
 5199   Gx 13 30.6   +34  49 r  CVn          15.  p vF,  vS,  lE
I4267   Gx 13 30.6   -26  16 m  Hya    1.2   15.  p wisp,  0'.7  long
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 5182   Gx 13 30.7   -28 08 r  Hya          13.  p vF,  pL,  vlE,  *7 nf 10'
 5191   Gx 13 30.7   +11 12 r  Vir          15.  p eF,  *9 f 57s
I4270   Gx 13 30.8   -25 20 m  Hya    0.8   14.  p bM,  mag  14
 5192   Gx 13 30.9   -01 47 r  Vir          15.  p vF
 5168   OC 13 31.2   -60 56 s  Cen    4.     9.1   Cl,  vF,  S,  vRi,  st  15
I4272       13 31.2   -29 58 d  Hya                bM,  D(?),  mag  14
 5188   Gx 13 31.3   -34 47 s  Cen          13.  p F,  pL,  vlE,  vglbM
I4282       13 31.3   +47 11 d  CVn                eF,  S,  R,  dif
 5196   Gx 13 31.4   -01 37 r  Vir          15.  p vF
I4273       13 31.4   -28 54 d  Hya                bM,  mag  13
I4274   Pl 13 31.4   -25 59 x  Hya                PN , stellar
 5197   Gx 13 31.5   -01 42 r  Vir          15.  p vF
I4284       13 31.5   +46 47 d  CVn                eF,  vS,  R
 5200   D* 13 31.7   -00 02 F  Vir                *12  in  F  neb
I4275       13 31.7   -29 44 d  Hya                bM,  mag  12.5
I 892   Gx 13 31.8   -02 43 u  Vir    1.3   14.  p pB,  iF,  bM,  r
I 893   Gx 13 31.8   -02 36 u  Vir    1.2   15.  p F,  vS,  dif
I4285       13 31.8   +46 49 d  CVn                eF,  vS,  lE
 5193   Gx 13 31.9   -33 14 s  Cen    1.8   13.  p pB,  S,  R,  g,  psbM
 5202   Gx 13 32.1   -01 42 r  Vir          15.  p vF
 5216   Gx 13 32.1   +62 42 s  UMa    3.0   14.  p pB,  S,  vlE
I 894   Gx 13 32.1   +17 03 m  Com    1.0   15.  p pF,  vS,  R,  lbM
 5203   Gx 13 32.2   -08 48 r  Vir          14.  p vF,  cS,  R,  gbM,  r
 5207   Gx 13 32.2   +13 54 r  Vir          14.  p F,  S,  cE,  *11  att  np
 5218   Gx 13 32.2   +62 46 s  UMa    2.1   12.3   pB,  pL,  R,  gbM
I4276       13 32.2   -28 10 d  Hya                bM,  wisps  0'.2  each  side
I4283   Gx 13 32.2   +28 24 z  CVn          15.  p F,  S,  R,  *14  att
I 895       13 32.3   +35 40 d  CVn                vF,  pLR,  sbM,  D?
 5208   Gx 13 32.5   +07 19 r  Vir          14.  p F,  vS,  R,  psbM,  p  of  2
I4279   Gx 13 32.5   -27 08 c  Hya    1.6           bM;  wisps  0'.3  l?
I4280       13 32.5   -24 13 d  Hya                eF,  pS,  R,  * nf,  vF*  n
 5212   Gx 13 32.6   +07 18 r  Vir          15.  p eF
I4281       13 32.6   -27 10 d  Hya                bM,  mag  13.5
 5209   Gx 13 32.7   +07 20 r  Vir          14.  p F,  vS,  R,  stellar,  f  of  2
I4287   Gx 13 32.7   +25 26 z  Com          15.  p F,  S,  R,  gbM;  another  vnr?
 5214   Gx 13 32.8   +41 52 r  CVn          14.  p vF,  S,  R,  lbM
 5210   Gx 13 32.9   +07 10 r  Vir          14.  p F,  S,  R,  psbMN
 5211   Gx 13 33.2   -01 02 r  Vir          14.  p pB,  S,  R,  psmbM
 5225   Gx 13 33.3   +51 30 r  CVn          14.  p cF,  pS,  iR,  lbM
 5189   Pl 13 33.5   -65 59 s  Mus    2.6   10.  p !,  B,  pL,  cE,  bM  curved  axis,  4  st  inv
 5206   Gx 13 33.7   -48 09 r  Cen                F,  pL,  R,  vgbM
I4286       13 33.7   -27 38 d  Hya                bM,  mag  14
I 897   Gx 13 33.9   +17 43 u  Com    1.0   15.  p vF,  s  of  5217
 5217   Gx 13 34.1   +17 51 r  Com          14.  p vF,  S,  R,  bM
 5229   Gx 13 34.1   +47 55 s  CVn    3.3   14.  p eF,  L,  mE,  v  diffic
I 896   Gx 13 34.1   +04 52 u  Vir    1.0   15.  p vF,  vS,  dif,  lbM
I 898   Gx 13 34.2   +13 17 z  Vir          15.  p vF,  vS,  dif
 5223   Gx 13 34.4   +34 42 s  CVn    1.8   14.  p F,  cS,  R,  *10  p,  p  of  2
 5228   Gx 13 34.5   +34 46 r  CVn          14.  p vF,  vS,  R,  f  of  2
I4288   Gx 13 34.6   -27 19 m  Hya    0.6   15.  p bM,  mag  14
 5213   Gx 13 34.7   +04 07 r  Vir          15.  p vF,  S,  lE
 5238   Gx 13 34.7   +51 37 s  CVn    2.0   13.  p cF,  pL,  R,  vlbM
I 900   Gx 13 34.7   +09 21 v  Vir    1.7           F,  S,  R,  gbM
 5221   Gx 13 34.9   +13 49 r  Vir          14.  p vF,  S,  vlE,  1st  of  3
 5222   Gx 13 34.9   +13 44 r  Vir          14.  p cF,  S,  R,  bM,  2nd  of  3
I 899   Gx 13 34.9   -08 05 n  Vir    0.3   15.  p F,  vS,  R,  sbM  N
I4289   Gx 13 34.9   -27 08 m  Hya    0.3   15.  p bM,  mag  14
 5215   Gx 13 35.0   -33 30 r  Cen          15.  p eF,  eS,  * s  and  * p
 5226   Gx 13 35.0   +13 54 r  Vir                eF,  pS,  5221  sp
 5233   Gx 13 35.1   +34 40 r  CVn          15.  p F,  S,  R,  vS*  nr
 5224   Gx 13 35.2   +06 28 r  Vir          15.  p vF,  S,  *9  nf  inv?
 5227   Gx 13 35.3   +01 25 s  Vir    1.9   15.  p vF,  S,  R
I4290   Gx 13 35.3   -28 01 c  Hya    2.3           annular,  F,  pL,  stell  N
I4297   Gx 13 35.3   +26 26 u  Com    1.1   15.  p F,  S,  R,  dif
 5262   Gx 13 35.4   +75 02 r  UMi          15.  p eF,  S
I4300   Gx 13 35.4   +33 25 m  CVn    0.2   16.  p F,  vS,  dif
 5230   Gx 13 35.5   +13 40 s  Vir    2.2   13.  p F,  L,  E,  vgbM,  3rd  of  3
I4301   Gx 13 35.6   +33 22 m  CVn    0.8   15.  p F,  S,  dif,  N
I4302   Gx 13 35.6   +33 29 u  CVn    1.3   16.  p vF,  cS,  dif
I 901   Gx 13 35.7   +13 20 u  Vir    1.3   16.  p pF,  eS,  R
 5231   Gx 13 35.8   +02 59 r  Vir          14.  p F,  S,  bM
I4292       13 35.8   -27 41 d  Hya                bM,  mag  13.5
 5220   Gx 13 35.9   -33 28 r  Cen                vF,  S,  R,  *10  f
 5240   Gx 13 35.9   +35 34 r  CVn          14.  p vF,  pL,  R,  lbM
 5232   Gx 13 36.0   -08 30 r  Vir          13.  p F,  vS
 5250   Gx 13 36.0   +51 14 r  UMa          14.  p pB,  S,  R,  vgbM
I 902   Gx 13 36.0   +49 58 u  UMa    2.2   15.  p eeF,  S,  mE,  v  diffic
I4293   Gx 13 36.0   -25 53 c  Hya    1.8           bM,  mag  13
I4304   Gx 13 36.0   +33 26 u  CVn    1.3   15.  p pB,  pS,  R,  gbM,  r
I4305   Gx 13 36.0   +33 28 m  CVn    0.3   14.  p pB,  cS,  lE  ns,  bMN
 5235   Gx 13 36.1   +06 34 r  Vir          15.  p vF,  pS,  vlE,  *9  sp
 5243   Gx 13 36.2   +38 21 s  CVn    1.7   14.  p cF,  pL,  E  65deg  , biN?
I4306   Gx 13 36.3   +33 25 m  CVn    0.4   15.  p F,  vS,  gbM,  *13  nr
 5239   Gx 13 36.5   +07 22 r  Boo          14.  p vF,  pL,  R,  er
I4294       13 36.5   -28 47 d  Hya                bM,  mag  14
I4295       13 36.5   -29 06 d  Hya                S,  lE,  mag  14
I4307   Gx 13 36.5   +27 15 m  Boo    0.5   15.  p F,  S,  E  pf,  *11  p  6s
 5241   Gx 13 36.6   -08 24 r  Vir          15.  p pF,  eS,  vF*  close
I4296   Gx 13 36.6   -33 58 s  Cen          10.6   pF,  pS,  R
I4298   Gx 13 36.7   -26 34 m  Hya    1.4   14.  p bM;  spiral?
I4299   Gx 13 36.8   -34 04 s  Cen          12.7   eeF,  eS,  F*  att
I4308       13 36.8   +32 43 d  CVn                F,  S,  dif,  vlbM
 5236   Gx 13 37.0   -29 52 s  Hya   11.2    7.6   !! vB,  vL,  E  55deg  , esbMN,  3-br  spir;  =
    M83
I4291       13 37.0   -62 03 d  Cen                pS,  R,  bM
 5242    - 13 37.1   +02 46 r  Vir                eF,  eL
 5255   Gx 13 37.3   +57 06 r  UMa          15.  p vF,  vS
I4303   Gx 13 37.3   -28 38 m  Hya    0.4   15.  p bM,  mag  13.5
 5234   Gx 13 37.5   -49 50 c  Cen    1.2           eeF,  S,  lE
 5245   Gx 13 37.5   +03 53 r  Vir                vF,  vS
 5246   Gx 13 37.5   +04 05 r  Vir          15.  p vF,  vS
 5248   Gx 13 37.5   +08 53 s  Boo    6.5   10.2   B,  L,  E  150deg  , psbMrN
 5251   Gx 13 37.5   +27 25 r  Boo          14.  p vF,  S,  vlE
 5237   Gx 13 37.6   -42 52 r  Cen                F,  pL,  cE,  vglbM
 5249   Gx 13 37.6   +15 58 r  Boo          14.  p vF,  S,  R,  bM
 5247   Gx 13 38.1   -17 53 s  Vir    5.4   10.5   !! cF,  vL,  vg,  psmbMLN,  2-branched  spiral
 5252   Gx 13 38.3   +04 31 r  Vir          14.  p vF,  S,  R,  bM
 5256   Gx 13 38.3   +48 17 s  UMa    1.4   14.  p eF,  vS,  R,  gbM
I 903   Nb 13 38.4   -00 14 x  Vir    0.3           pB,  lE  ns,  gbM  N  =  13m
I4313       13 38.4   +26 45 d  Boo                F,  vS,  R,  stell
I4314       13 38.4   +26 44 d  Boo                F,  vS,  N,  stell
 5244   Gx 13 38.6   -45 53 r  Cen                vF,  S,  R,  vglbM,  *13  att
 5295   Gx 13 38.6   +79 27 r  Cam          15.  p vF,  vS,  R
I 904   Gx 13 38.6   +00 32 u  Vir    1.1   15.  p F,  vS,  dif
 5219   Gx 13 38.7   -45 51 c  Cen                vF,  S,  R,  * n,  nr;  = 5244
I4309       13 38.7   -29 41 d  Hya                bM,  mag  14
I4310   Gx 13 38.9   -25 51 c  Hya    2.3           vF,  bM,  wisps  0'.3  l
 5259   Gx 13 39.3   +30 59 r  CVn          15.  p vF,  S,  iR
I 907       13 39.5   +50 43 d  UMa                eF,  pS,  R
 5254   Gx 13 39.6   -11 30 s  Vir    3.2   13.  p pB,  L,  pmE,  glbM
 5253   Gx 13 39.9   -31 39 s  Cen    4.0   10.6   B,  pL,  E  45deg  +/-  , psmbM
 5257   Gx 13 39.9   +00 50 s  Vir    1.9   14.  p vF,  S,  R,  bM,  p  of  Dneb
 5258   Gx 13 40.0   +00 50 s  Vir    1.8   14.  p F,  S,  iR,  f  of  Dneb
 5263   Gx 13 40.0   +28 24 r  CVn          14.  p cF,  S,  mE  0deg  +/-  , *9  sp
I4315   Gx 13 40.0   -25 28 c  Hya    1.6           wisp  1'.3  l
 5265   Gx 13 40.1   +36 51 r  CVn          15.  p F,  cS,  vlE,  er
I 905   Gx 13 40.1   +23 10 m  Boo    0.8   15.  p F,  vS,  R,  lbM,  stellar
I 906   Gx 13 40.1   +23 22 m  Boo    0.8   16.  p eF,  S,  bM
I4311       13 40.1   -51 03 d  Cen                vF;  spiral?
 5261   Gx 13 40.3   +05 03 r  Vir          15.  p vF,  R,  am  pB  st
I4316   Gx 13 40.3   -28 54 c  Hya    2.2           bM,  mag  14.5
 5260   Gx 13 40.4   -23 51 s  Hya    1.9   13.  p eF,  pL,  3  st  f  in  a  line
I4312   Gx 13 40.5   -51 04 c  Cen    1.6           eeF,  bM
 5267   Gx 13 40.6   +38 46 r  CVn          14.  p F,  S,  R,  gbM,  S*  np
I 909   Gx 13 40.8   +24 29 z  Boo          15.  p no  descr
 5283   Gx 13 41.1   +67 40 s  Dra    1.3   14.  p F,  S,  stell
I 910   Gx 13 41.1   +23 17 m  Boo    0.5   15.  p F,  S,  bM,  r
I 908   Gx 13 41.2   -04 19 m  Vir    0.8   15.  p eF,  pS,  *13.5  close
I 911   Gx 13 41.4   +23 15 m  Boo    0.4   16.  p eF,  eS,  R,  lbM
I 912   Gx 13 41.4   +23 15 m  Boo    0.6   16.  p eF,  eS,  R,  lbM
I 913   Gx 13 41.5   +23 10 u  Boo    1.0   16.  p vF,  vS,  R,  dif
 5264   Gx 13 41.6   -29 55 s  Hya    1.8   13.  p vF,  pL,  R,  vlbM
 5271   Gx 13 41.6   +30 07 r  CVn          15.  p vF,  vS,  R,  gvlbM
 5278   Gx 13 41.6   +55 40 s  UMa    1.4   14.  p pF,  R,  vS  neb  40"  f,  * n
 5279   Gx 13 41.7   +55 40 s  UMa    1.3   14.  p F,  vS,  f  of  2
I 914   Gx 13 41.7   +23 12 m  Boo    0.6   15.  p vF,  vS,  R,  dif
I4317       13 41.8   +27 06 d  Boo                F,  S,  R,  N,  r
 5268   *? 13 42.1   -13 52 F  Vir                a  nebula
 5273   Gx 13 42.1   +35 39 s  CVn    3.1   11.6   cB,  pL,  R,  g,  psmbM
 5272   Gb 13 42.2   +28 23 s  CVn   16.2    6.4   !!,  glob.  cl.  , eB,  vL,  vsmbM,  st  11...;  =
    M3
 5270   Gx 13 42.3   +04 14 r  Vir          14.  p eF,  S,  bet  2  st
 5274   Gx 13 42.3   +29 50 r  CVn          15.  p vF,  vS,  R,  bM
 5275   Gx 13 42.3   +29 49 r  CVn          15.  p F,  S,  R,  gmbM
 5276   Gx 13 42.4   +35 38 s  CVn    1.1   15.  p F,  S
 5277   Gx 13 42.6   +29 57 r  CVn          15.  p eF,  S,  R,  bM
I 916   Gx 13 42.6   +24 28 m  Boo    0.5   15.  p N  =  13m
I 917       13 42.7   +55 38 d  UMa                S
 5280   Gx 13 42.8   +29 51 r  CVn          15.  p F,  vS,  R,  bM
I 918       13 42.8   +55 36 d  UMa                vF,  vS
I 919       13 42.9   +55 35 d  UMa                cB,  R,  bM
 5266   Gx 13 43.0   -48 11 s  Cen    3.2   12.  p B,  pL,  vlE,  vglbM,  3  st  nr
I 921       13 43.2   +55 40 d  UMa                vS,  R,  bM
 5282   Gx 13 43.3   +30 04 r  CVn          15.  p F,  S,  R,  gbM  *14
I 922   Nb 13 43.3   +55 36 x  UMa    0.1           vS,  R,  bM
I 923       13 43.3   +55 37 d  UMa                vS
I4318   Gx 13 43.3   -28 57 m  Hya    0.8   15.  p bM,  mag  14
I 925       13 43.4   +55 36 d  UMa                vS
I4319   Gx 13 43.4   -29 48 c  Hya    1.6           cL,  E,  bM,  mag  13.5
I 915       13 43.5   -17 20 d  Vir                eF,  vS,  diffic
I 926       13 43.5   +55 39 d  UMa                vS,  R,  bM
I 928   Nb 13 43.7   +55 37 x  UMa    0.1           F,  vS,  R,  gbM
I 929       13 43.7   +55 39 d  UMa                vS,  R,  bM
I4322   Gx 13 43.7   +25 23 z  Boo          15.  p F,  S,  R,  N,  r
I 930       13 43.8   +55 41 d  UMa                F,  vS,  R,  gbM
I 931   Nb 13 43.8   +55 37 x  UMa    0.1           F,  vS,  R,  gbM
I 932       13 43.8   +55 38 d  UMa                vS,  R
I 934       13 44.0   +55 37 d  UMa                F,  vS,  R
I 935       13 44.0   +55 36 d  UMa                F,  vS,  R,  gbM
I 936       13 44.0   +55 37 d  UMa                F,  vS,  R
I4320   Gx 13 44.1   -27 15 m  Hya    0.6   14.  p bM,  mag  13.5
I4321   Gx 13 44.4   -30 08 m  Cen    0.5   15.  p bM,  mag  15
 5285   Gx 13 44.5   +02 05 r  Vir          15.  p eF,  vS,  R,  gvlbM
I 937       13 44.5   +55 39 d  UMa                vS
I 938       13 44.6   +55 37 d  UMa                vS
 5269    - 13 44.8   -62 55 r  Cen                Cl,  P,  L,  iF,  st  12
 5287   Gx 13 44.9   +29 48 r  CVn          16.  p F,  S,  irr,  r?
 5289   Gx 13 45.1   +41 30 s  CVn    1.9   14.  p vF,  vS,  lE  90deg  +/-  , sbM
I4323       13 45.1   -28 39 d  Hya                cS,  wisp,  mE
 5294   Gx 13 45.2   +55 17 r  UMa          15.  p eF,  2  st  att  or  inv
 5290   Gx 13 45.3   +41 43 s  CVn    3.7   13.  p cB,  pL,  E  90deg  +/-  , bMN
I 933   Gx 13 45.3   +23 13 u  Boo    1.3   15.  p vF,  vS,  R,  N  =  13m,  stellar
I4324   Gx 13 45.4   -30 13 m  Cen    0.4   15.  p bM,  mag  13.5
 5323   Gx 13 45.5   +76 51 r  UMi          14.  p vF,  pS,  lE  0deg  +/-
I 920   Gx 13 45.5   -12 34 m  Vir    0.4   15.  p F,  vS,  R,  bM  N,  r
I 924       13 45.6   -12 27 d  Vir                F,  S,  dif,  86  Vir  nf
I 927       13 45.9   -12 28 d  Vir                F,  S,  dif,  86  Vir  nf
 5314   Gx 13 46.2   +70 21 r  UMi          14.  p vF,  eS,  stellar,  eF*  v  close
 5296   Gx 13 46.3   +43 51 s  CVn    1.2   15.  p R,  bM,  is  sp  5297
 5286   Gb 13 46.4   -51 22 s  Cen    9.1    7.6   glob.  cl.  , vB,  pL,  R,  rrr,  st  15
 5297   Gx 13 46.4   +43 52 s  CVn    5.6   12.  p cB,  L,  pmE  142deg  , gbM
 5301   Gx 13 46.4   +46 06 s  CVn    4.4   13.  p cF,  L,  vmE
 5281   OC 13 46.6   -62 54 s  Cen    5.     5.9   Cl,  B,  S,  pC,  iR,  st  10...12
 5284    - 13 46.6   -59 11 r  Cen                Cl,  L,  vRi,  st  7...16
 5293   Gx 13 46.9   +16 16 s  Boo    1.9   14.  p eF,  vL,  r
 5308   Gx 13 47.0   +60 58 s  UMa    3.5   11.3   B,  pL,  mE  57deg  , psbMBEN
I4330   Gx 13 47.2   -28 20 c  Hya    1.4           pL,  E,  mag  13.5
 5291   Gx 13 47.4   -30 25 s  Cen    1.4           vF,  R,  vlbM,  **  p
I 942   Gx 13 47.6   +56 36 m  UMa    0.3   15.  p eF,  pS,  R
I4325   Gx 13 47.6   -29 26 m  Hya    0.8   16.  p R,  PN ?,  mag  14
 5292   Gx 13 47.7   -30 57 s  Cen    1.6   14.  p pF,  S,  R,  2  st  nr
I 939   Gx 13 47.7   +03 24 m  Vir    1.0   15.  p pB,  vS,  bM
 5303   Gx 13 47.8   +38 18 s  CVn    1.1   13.  p pF,  cS,  lE,  F**  inv
 5305   Gx 13 47.9   +37 50 r  CVn                14.  p eF,  S,  R
I 940   Gx 13 47.9   +03 27 z  Vir          15.  p vF,  vS,  dif
I 945   Gx 13 48.0   +72 03 m  UMi    0.5   16.  p eeF,  S,  R,  2  st  nf
 5298   Gx 13 48.2   -30 27 s  Cen    1.4   14.  p F,  S,  R,  gbM
 5300   Gx 13 48.3   +03 57 s  Vir    3.9   12.  p vF,  vL,  lE,  vgbM
I4326   Gx 13 48.4   -29 37 m  Hya    0.6   15.  p R,  PN ?,  mag  14
I 941   Gx 13 48.5   +24 00 z  Boo          15.  p F,  eS,  gbM,  r
 5288   OC 13 48.7   -64 41 s  Cir    4.    12.  p Cl,  S,  C,  iR,  st  14
I4327   Gx 13 48.7   -30 13 c  Cen    1.1           bM,  mag  12.5
 5302   Gx 13 48.8   -30 31 s  Cen    1.7   12.2   F,  S,  R,  gbM
 5311   Gx 13 49.0   +40 00 r  CVn          13.  p cF,  cS,  R,  sbM,  p  of  2
 5306   Gx 13 49.1   -07 12 r  Vir          14.  p vF,  vS,  R,  r
 5340   Gx 13 49.1   +72 39 r  UMi          15.  p eF,  S,  R
I4328       13 49.1   -29 57 d  Hya                R,  lbM,  mag  14
I4329   Gx 13 49.1   -30 18 s  Cen    3.2   11.5   F,  cS,  bM
 5322   Gx 13 49.3   +60 12 s  UMa    5.5   10.0   vB,  pL,  iR,  psmbM
I4331       13 49.4   +25 09 d  Boo                pF,  S,  R,  dif
 5313   Gx 13 49.7   +39 59 s  CVn    1.9   13.  p pB,  pS,  vlE,  glbM,  f  of  2
I4335       13 49.7   +33 40 d  CVn                vF,  stell,  neb(?);  *13  nnf  2'.5
 5310    * 13 49.8   +00 04 F  Vir                *12  in  F  neb
 5312   Gx 13 49.8   +33 38 r  CVn          15.  p vF,  R,  stellar,  1st  of  4
I4334   Pl 13 49.8   +29 40 x  CVn    0.1           F,  vS,  R,  N
I4332   Gx 13 49.9   +25 11 m  Boo    0.8   15.  p F,  S,  R,  gbM
 5304   Gx 13 50.0   -30 35 s  Cen    1.0   15.  p eF,  pS,  lE,  vF*  at  160deg  , dist  0'.7
 5309    - 13 50.0   -15 45 r  Vir                vF,  pS,  R,  bet  *  and  D*
 5344   Gx 13 50.0   +73 58 r  UMi          15.  p vF,  S,  R
I 954   Gx 13 50.0   +71 10 v  UMi    1.3           eeF,  S,  R,  B*  f
 5320   Gx 13 50.3   +41 22 s  CVn    3.5   13.  p cF,  pL,  R,  gbM
 5299  Ast 13 50.4   -59 56 A  Cen   30.            Cl,  vL,  vRi
 5318   Gx 13 50.5   +33 43 r  CVn          13.  p F,  S,  R,  psbM,  2nd  of  4
 5319   Gx 13 50.5   +33 43 r  CVn          15.  p vF,  R,  n  of  5318,  3rd  of  4
I 943   Gx 13 50.5   +03 11 m  Vir    0.6   15.  p pF,  iF,  lbM,  F*  close
 5321   Gx 13 50.7   +33 39 r  CVn          15.  p eF,  pL,  R,  svmbM  *,  4th  of  4
I4336   Gx 13 50.7   +39 42 u  CVn    1.6   15.  p eF,  pL,  dif,  lbM,  r
 5326   Gx 13 50.8   +39 34 s  CVn    2.5   13.  p cF,  S,  vlE,  sbM
 5325   Gx 13 51.0   +38 17 r  CVn          15.  p eeF,  pS,  R,  v  diffic,  2  B  st  nr
 5307   Pl 13 51.1   -51 12 s  Cen    0.2   12.  p PN , or  vF,  eS,  Dneb
 5317    - 13 51.2   +05 00 r  Vir                vF,  vL,  R,  vgbM
 5342   Gx 13 51.4   +59 53 r  UMa          14.  p eF,  vS
I 944   Gx 13 51.5   +14 05 u  Boo    1.7   15.  p vS,  pS,  mE,  3  st  f
I 951   Gx 13 51.7   +51 00 u  UMa    1.4   14.  p eeF,  pS,  R,  2  st  nr  sp
 5324   Gx 13 52.1   -06 03 s  Vir    2.4   12.  p cF,  L,  iR,  bM
 5327   Gx 13 52.1   -02 12 r  Vir          14.  p F,  pS,  R,  2  st  p
 5332   Gx 13 52.1   +16 59 r  Boo          14.  p vF,  S,  R
 5336   Gx 13 52.1   +43 15 r  CVn          13.  p cF,  pL,  R,  psbM
I 946   Gx 13 52.1   +14 06 u  Boo    1.0   14.  p eF,  vS,  R,  *  close  f
 5329   Gx 13 52.2   +02 20 r  Vir          14.  p F,  vS,  R,  psbM
I 949   Gx 13 52.2   +22 31 u  Boo    1.2   15.  p pF
I4337   Gx 13 52.2   +14 16 z  Boo          15.  p eeF,  pL,  R,  v  diffic,  3rd  of  4
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 5331   Gx 13 52.4   +02  06 r  Vir          14.  p vF,  S,  E 0deg  , rr
 5385    - 13 52.4   +76  11 r  UMi                Cl,  P,  S
I 948   Gx 13 52.4   +14  05 u  Boo    1.2   14.  p eF,  S,  R
I 950   Gx 13 52.4   +14  29 u  Boo    1.4   15.  p F,  eS,  R,  lbM
 5337   Gx 13 52.5   +39  42 r  CVn          13.  p vF,  S,  iR,  *7 p
 5341   Gx 13 52.6   +37  50 r  CVn          14.  p lE,  bM,  sp  5351
I 947   Gx 13 52.7   +00  48 u  Vir    1.7   14.  p pB,  vS,  R,  sbMN  = 12m
I4338      13 52.7   -01  08 x  Vir                eF,  vL,  cE ns,  F* nr each  end;  = 5334
 5328   Gx 13 52.9   -28  29 s  Hya    1.7   11.8   pB,  S,  R,  slbM
 5334   Gx 13 52.9   -01  07 s  Vir    4.4   12.  p cF,  vL,  R,  lbM,  r;  = IC  4338
 5330   Gx 13 53.0   -28  28 s  Hya          15.  p eeF,  S,  R,  v diffic,  nf  5328
 5335   Gx 13 53.0   +02  50 r  Vir          14.  p F,  iR
 5346   Gx 13 53.2   +39  35 r  CVn          15.  p eF,  pL,  irrR,  glbM,  r?
 5349   Gx 13 53.2   +37  54 r  CVn          15.  p bM,  sp  5351
 5347   Gx 13 53.3   +33  29 s  CVn    1.9   12.6   pF,  cL,  R,  lbM
 5350   Gx 13 53.4   +40  22 s  CVn    3.2   11.4   cF,  pL,  bM,  *7 p,  1st  of  4
 5338   Gx 13 53.5   +05  13 r  Vir          14.  p vF,  E pf,  4' f  D*
 5351   Gx 13 53.5   +37  55 s  CVn    3.1   12.1   cF,  L,  lE  90deg  , vgbM
 5353   Gx 13 53.5   +40  17 s  CVn    2.8   11.1   pB,  S,  R,  2nd  of  4
 5354   Gx 13 53.5   +40  18 s  CVn    2.3   11.5   pF,  S,  R,  3rd  of  4
I4339      13 53.5   +37  32 d  CVn                F,  S,  R,  r
 5352   Gx 13 53.6   +36  09 r  CVn          14.  p cF,  S,  R,  lbM,  * nf  90"
I4340   Gx 13 53.6   +37  23 m  CVn    0.7   14.  p F,  S,  R,  gbM
I4341      13 53.6   +37  32 d  CVn                F,  S,  R,  r,  *12  nr
I 952   Gx 13 53.7   +03  22 u  Vir    1.4   15.  p F,  E pf,  F* inv
 5339   Gx 13 53.8   -07  56 s  Vir    2.1   12.  p vF,  pS,  R
 5355   Gx 13 53.8   +40  21 r  CVn          14.  p vF,  pS,  4th  of  4
 5315   Pl 13 53.9   -66  31 s  Cir    0.1   13.  p PN  , stellar  = 10.5  mag
 5316   OC 13 53.9   -61  52 s  Cen   14.     6.0   Cl,  pL,  pC,  st  11
 5343   Gx 13 54.0   -07  34 r  Vir          14.  p vF,  S,  R,  lbM
 5358   Gx 13 54.1   +40  17 r  CVn          14.  p vF,  vS,  R,  2 vF  st  inv
 5370   Gx 13 54.1   +60  41 r  UMa          14.  p F,  S
 5348   Gx 13 54.2   +05  14 s  Vir    3.6   14.  p vF,  mE  ns
 5345   Gx 13 54.3   -01  25 r  Vir          14.  p F,  S,  R,  bM
I4342   Gx 13 54.4   +25  07 m  Boo    0.8   15.  p F,  S,  R,  lbM,  r
 5333   Gx 13 54.5   -48  31 t  Cen    1.9                vF,  vS,  R,  *8 f
 5368   Gx 13 54.5   +54  20 s  UMa    1.1   14.  p F,  cS,  R,  stellar,  *16  nf
 5452   Gx 13 54.5   +78  13 s  UMi    2.3   13.  p vF,  pL,  iR,  vgvlbM
 5361   Gx 13 54.7   +38  27 r  CVn          14.  p eF,  cS,  E
 5372   Gx 13 54.7   +58  41 r  UMa          13.  p cF,  S,  E;  **  inv?
I 956   Gx 13 54.7   +20  43 z  Boo          16.  p eF,  vS,  *14  n
 5362   Gx 13 54.9   +41  19 s  CVn    2.4   13.  p pB,  pL,  E
 5356   Gx 13 55.0   +05  20 s  Vir    3.2   14.  p F,  pL,  vmE  17deg  , r
I 953      13 55.0   -30  21 d  Cen                vF,  eS,  gbM
I4343   Gx 13 55.0   +25  06 m  Boo    0.7   16.  p F,  S,  R,  N,  r
I4344      13 55.2   +25  02 d  Boo                F,  vS,  N,  stell
I4345      13 55.2   +25  04 d  Boo                cF,  vS,  R,  N,  stell
 5376   Gx 13 55.3   +59  30 s  UMa    2.1   13.  p cB,  pL,  vlE,  vgmbM
 5379   Gx 13 55.6   +59  45 s  UMa    2.2   14.  p pB,  pS,  E,  mbM
 5360   Gx 13 55.7   +04  59 s  Vir    2.0   14.  p vF,  vS,  lE
 5371   Gx 13 55.7   +40  28 s  CVn    4.4   10.8   pB,  L,  R,  bMFN
I 955      13 55.7   -30  16 d  Cen                vF,  vS,  gbM
I4346      13 55.7   +25  09 d  Boo                F,  S,  R,  gbMN
I4348   Gx 13 55.7   +25  11 z  Boo          16.  p F,  S,  R,  N
I 958    ? 13 55.8   +05  02 x  Vir                eeF,  pS,  iR
 I 961   Gx 13 55.8   +25  50 z  Boo          15.  p vF,  S,  dif
I4349      13 55.8   +25  09 d  Boo                F,  S,  bM
 5357   Gx 13 56.0   -30  20 s  Cen          14.  p pF,  S,  R,  glbM,  bet  2 st  10
I 959   Gx 13 56.0   +13  30 u  Boo    1.8   14.  p eeF,  S,  R
I 960   Gx 13 56.0   +17  31 m  Boo    0.8   15.  p F,  pL,  lbM,  dif
 5363   Gx 13 56.1   +05  15 s  Vir    4.2   10.2   B,  pL,  R,  psbM,  *8 nf
 5389   Gx 13 56.1   +59  44 s  UMa    4.1   13.  p pB,  pL,  E,  mbMN
I 957      13 56.1   -30  14 d  Cen                vF,  S,  gbM
 5364   Gx 13 56.2   +05  01 s  Vir    7.1   10.4   cF,  L,  R,  gbM
 5377   Gx 13 56.3   +47  14 s  CVn    4.6   11.2   B,  L,  mE  42deg  , smbMN
 5366   Gx 13 56.4   -00  14 r  Vir          14.  p S,  R,  *9 dist  2'
 5369   Gx 13 56.8   -05  29 r  Vir                vF,  vS,  R
 5375   Gx 13 56.8   +29  10 s  CVn    3.5   12.  p pB,  pL,  R,  lbM
 5378   Gx 13 56.8   +37  48 s  CVn    2.7   14.  p pB,  lE,  vglbM
 5380   Gx 13 56.9   +37  37 s  CVn    2.1   13.  p F,  cS,  R,  smbM
 5391   Gx 13 57.0   +46  17 r  CVn          16.  p F,  vS,  ' close
 5415   Gx 13 57.0   +70  46 r  UMi          15.  p eF,  vS,  R,  2 F  st  nr
 5383   Gx 13 57.1   +41  51 s  CVn    3.5   11.4   cB,  cL,  R,  gbM
I4353      13 57.1   +37  46 d  CVn                eF,  vF st  & neb?,  *8.4  nf  3'
 5373   Gx 13 57.2   +05  16 r  Vir          15.  p vF,  vS,  stell
I4350   Gx 13 57.2   -25  15 c  Hya    1.9         eeF,  eS,  F* close  s
 5390    - 13 57.3   +40  26 r  CVn                F,  L,  vgbM,  *9 nf;  = 5371?
I 962      13 57.3   +12  03 d  Boo                pF,  vS,  R,  bM
 5412   Gx 13 57.4   +73  36 r  UMi          14.  p pF,  S,  R,  D*  p
I 963   Gx 13 57.4   +17  25 m  Boo    0.7   15.  p eF,  vS,  R
 5374   Gx 13 57.5   +06  06 s  Vir    1.9   14.  p cF,  pL,  R,  vgbM,  *11  np
I4347      13 57.6   -40  01 d  Cen                *9 in  eeF  neb
 5367   Nb 13 57.7   -39  59 s  Cen    4.          !,  vB,  vL,  vl,  vsmbM  **
I 964   Gx 13 57.7   +17  31 m  Boo    0.3   15.  p eF,  eS,  R
I 965   Gx 13 57.8   +17  31 m  Boo    0.8   15.  p vF,  vS,  R,  vSN
 5365   Gx 13 57.9   -43  57 s  Cen    3.1   12.  p pB,  cS,  R,  pgbM,  am  st
 5413   Gx 13 57.9   +64  56 r  Dra          14.  p pF,  pS,  R,  pslbM,  *7 p  37s
I4351   Gx 13 57.9   -29  19 s  Hya    5.6   12.  p S,  lE
 5384   Gx 13 58.1   +06  32 r  Vir          14.  p F,  vS,  stell
I4355   Gx 13 58.1   +28  25 m  CVn    0.4   15.  p F,  S,  R,  glbM
 5382   Gx 13 58.2   +06  16 r  Vir          14.  p vF,  vS,  r,  stellar
 5386   Gx 13 58.2   +06  21 r  Vir          13.  p vF,  vS,  biN,  r,  stellar
 5402   Gx 13 58.2   +59  49 r  UMa          14.  p vF,  vS,  R
I 966   Gx 13 58.2   +05  24 u  Vir    1.6   15.  p F,  S,  R,  gbM,  r
 5387   Gx 13 58.4   +06  04 s  Vir    1.8   15.  p vF  ray,  2'  l
I 967   Gx 13 58.4   +14  27 m  Boo    0.7   15.  p pF,  vS,  R,  *14  nr
I4352   Gx 13 58.4   -34  31 c  Cen    1.9         sev  eF st  in  eeF  neb,  2 st  8  n
 5394   Gx 13 58.6   +37  27 s  CVn    1.9   13.0   cF,  S,  np  of  2
 5395   Gx 13 58.6   +37  25 s  CVn    3.1   11.6   cF,  cL,  E  15deg  , lbM,  sf  of  2
I4354      13 58.6   -12  35 d  Vir                eF,  vS,  eE  110deg
I4356      13 58.7   +37  30 d  CVn                F,  vS,  stell  N = *15
 5388    - 13 58.9   -14  09 r  Vir                F,  S,  R,  vgbM
 5396    - 13 59.0   +29  07 r  CVn                vF,  S,  iR,  sbM  *
 5392      13 59.4   -03  12 d  Vir                vF,  cS,  R,  gbM
 5399   Gx 13 59.5   +34  47 r  CVn          14.  p eF,  vS,  pmE  90deg
 5401   Gx 13 59.7   +36  15 r  CVn          14.  p cF,  cS,  E
 5359   OC 13 59.8   -70  24 A  Cir                Cl,  vL,  lRi,  lC,  st  11
 5403   Gx 13 59.9   +38  11 s  CVn    3.2   15.  p vF,  pL,  iF
 5406   Gx 14 00.3   +38  55 s  CVn    2.1   13.  p F,  pS,  R,  lbM
 5393   Gx 14 00.5   -28  50 r  Hya          15.  p vF,  S,  R,  glbM
 5381   OC 14 00.6   -59  34 s  Cen   14.          Cl,  Ri,  vC,  pL,  st  11...12
 5400   Gx 14 00.6   -02  51 r  Vir          14.  p vF,  cS
I 968      14 00.6   -02  57 d  Vir                vF,  vS,  stellar
 5410   Gx 14 00.7   +41  00 r  CVn          14.  p pF,  pS,  bM
 5422   Gx 14 00.7   +55  10 s  UMa    3.9   13.  p pB,  S,  pmE  45deg  +/-  , vsvmbMN
I4357   Gx 14 00.7   +31  54 u  CVn    1.2   15.  p F,  S,  R,  gvlbM
 5425   Gx 14 00.8   +48  27 r  UMa          14.  p eF,  S,  mE  290deg  , B* 4'  n
 5430   Gx 14 00.8   +59  20 s  UMa    2.4   13.  p pB,  S,  iE,  mbM
 5407   Gx 14 00.9   +39  09 r  CVn          14.  p vF,  vS,  R,  bM,  in  Cl
 5404   D* 14 01.1   +00  05 F  Vir                *12  in  neb
 5405   Gx 14 01.1   +07  43 r  Boo          14.  p vF,  iF,  bM
 5397   Gx 14 01.2   -33  57 r  Cen                vF,  S,  R,  gbM
 5398   Gx 14 01.4   -33  04 s  Cen    2.9   13.  p pB,  pL,  R,  vgbM
 5409   Gx 14 01.7   +09  30 r  Boo          14.  p eF,  R,  5416  f  26s
 5421   Gx 14 01.7   +33  50 r  CVn          14.  p F,  irrR,  2 vF  st  inv
I 969      14 01.8   -04  11 d  Vir                vF,  vS,  R,  N = 14m
 5411   Gx 14 01.9   +08  57 r  Boo          14.  p vvF
 5414   Gx 14 02.0   +09  57 r  Boo          14.  p S,  F* in centre,  *10-11  nf
 5439   Gx 14 02.0   +46  19 r  CVn          14.  p vF,  pL,  cE,  bet  2 st
 5416   Gx 14 02.1   +09  27 r  Boo          13.  p eF,  vS,  E,  r
 5417   Gx 14 02.1   +08  03 r  Boo          14.  p cF,  S,  R,  psbM,  * p

 5418   Gx 14 02.2   +07  42 r  Boo          14.  p vF,  R,  bM
 5443   Gx 14 02.2   +55  49 s  UMa    2.8   13.  p pF,  L,  E
 5433   Gx 14 02.5   +32  31 s  CVn    1.7   14.  p vF,  cS,  lE  0deg  , bM
 5447   Kt 14 02.5   +54  17 r  UMa                pB,  S,  R,  gmbM,  conn  with  M101
 5449   Kt 14 02.5   +54  19 A  UMa                vF,  pL,  gvlbM,  conn  with  M101
 5450   Kt 14 02.5   +54  14 A  UMa                F,  pS,  iR,  glbM,  conn  with  M101
I 970   Gx 14 02.5   +14  33 u  Boo    1.2   15.  p pB,  vS,  R
 5423   Gx 14 02.7   +09  21 r  Boo          14.  p vF,  R,  * in centre
 5451   Kt 14 02.7   +54  22 A  UMa                vF,  pL,  iR,  vlbM,  conn  with  M101
 5448   Gx 14 02.8   +49  10 s  UMa    4.2   12.  p pB,  cL,  vmE  90deg  +/-  , smbMN
 5469   Gx 14 02.8   +09  20 r  Boo          15.  p vF,  pS,  R
 5424   Gx 14 02.9   +09  26 r  Boo          14.  p vF,  R,  * in centre
 5420   Gx 14 03.0   -14  37 d  Vir          13.  p F,  pS,  mE,  com
 5431   Gx 14 03.0   +09  23 r  Boo          15.  p vF
 5440   Gx 14 03.0   +34  46 s  CVn    3.3   13.  p pF,  cS,  lE,  bM,  *11  sp
 5453   Kt 14 03.0   +54  18 A  UMa                F,  pL,  lE,  vlbM,  conn  w  M101
 5455   Kt 14 03.0   +54  12 r  UMa                pB,  pS,  R,  psbM,  conn  w  M101
 5441   Gx 14 03.2   +34  41 r  CVn          15.  p vF,  S
 5457   Gx 14 03.2   +54  21 s  UMa   26.9    7.7   pB,  vL,  iR,  g,  vsmbNBSN;  = M101
 5458    - 14 03.2   +54  16 r  UMa                vF,  pL,  R,  vlbM,  conn  w  M101
 5408   Pl 14 03.3   -41  23 s  Cen                eF,  E bet  2 vS  st
 5434   Gx 14 03.3   +09  27 r  Boo          14.  p vF,  L
 5426   Gx 14 03.4   -06  04 s  Vir    2.9   12.2   pF,  cL,  R,  gmbM,  sp  of  2
 5427   Gx 14 03.4   -06  02 s  Vir    2.5   11.4   pF,  cL,  R,  nf  of  2
 5428    * 14 03.4   -06  02 F  Vir                1st  of  2 nr  5427
 5429    * 14 03.4   -06  02 F  Vir                2nd  of  2,  in line  with  5426-  7
 5444   Gx 14 03.4   +35  08 s  CVn    2.7   13.  p pB,  pL,  ivlE,  vsmbM
 5445   Gx 14 03.5   +35  02 r  CVn          14.  p F,  *13  p
I4358   Gx 14 03.5   -10  09 m  Vir    1.2   15.  p pL,  mE  120deg  ;  spir  neb  f  (IC  971)
 5432    * 14 03.6   -05  57 F  Vir                vF
 5436   Gx 14 03.6   +09  35 r  Boo          15.  p 1st  of  3  vF  in  a  line,  2'-  3'  dist
 5419   Gx 14 03.7   -33  59 s  Cen          12.  p pB,  pL,  R,  gpmbM
 5437   Gx 14 03.7   +09  31 r  Boo          15.  p 2nd  of  3
 5438   Gx 14 03.7   +09  37 r  Boo          14.  p 3rd  of  3,  nf  *8.6
 5461   Kt 14 03.7   +54  19 r  UMa                B,  pS,  R,  psbM,  conn  with  M101
 5435    * 14 03.8   -05  54 F  Vir                vF,  *10-  11  close  f
I 971      14 03.8   -10  08 D  Vir                fine  spiral,  pL,  mbM
I4365   Gx 14 03.8   +09  31 m  Boo    0.8   15.  p *13  in  vF,  S  neb  (perhaps  5438)
 5462   Kt 14 03.9   +54  22 r  UMa                pB,  pL,  iR,  gbM,  conn  with  M101
I4360      14 04.1   -11  24 d  Vir                eF,  eS,  E  35deg
I4361   Gx 14 04.1   -09  46 m  Vir    0.6   15.  p eF,  vS,  cE  150deg
I4369      14 04.1   +33  19 d  CVn                vF,  S,  R,  dif
I4363      14 04.2   -09  38 d  Vir                eF,  vS,  cE  150deg
I4370      14 04.2   +33  21 d  CVn                F,  S,  iF,  gbM,  *14  nr
I4371      14 04.2   +33  18 d  CVn                F,  S,  R,  vlbM
I4364   Gx 14 04.3   -10  00 m  Vir    0.6   15.  p eF,  vS,  R
I 972   Pl 14 04.4   -17  15 s  Vir    0.7   15.  p F,  vS,  R,  r
 5471   Kt 14 04.6   +54  24 r  UMa                F,  S,  R,  *12-  13  p
 5454   Gx 14 04.7   +14  23 r  Boo          14.  p pF,  S
 5473   Gx 14 04.7   +54  54 s  UMa    2.6   11.4   pB,  S,  R,  gbM
I4368      14 04.7   -09  57 d  Vir                F,  S,  R,  bM
 5442   Gx 14 04.9   -09  43 r  Vir          14.  p vF,  vS,  iR
 5456   Gx 14 04.9   +11  53 r  Boo          14.  p F,  pS
I4333   Gx 14 05.    -84  16 c  Oct    1.7         eF,  vS,  eE  40deg  , susp
 5474   Gx 14 05.0   +53  40 s  UMa    4.5   10.9   pB,  L,  bM
 5446   Gx 14 05.1   +09  37 r  Boo                eF,  eS
 5475   Gx 14 05.2   +55  45 s  UMa    2.2   13.  p pB,  S,  pmE,  bM
I4366   Gx 14 05.2   -33  46 c  Cen    1.8         vF,  vS,  cE  170deg
 5459      14 05.3   +13  08 D  Boo                F,  S,  lE,  pB*  sp
I4359      14 05.4   -45  16 d  Cen                eF,  vS,  E  170deg  , bet  2 F  st
I4362   Gx 14 05.4   -41  49 c  Cen    1.7         vF,  S,  vE  175deg
 5466   Gb 14 05.5   +28  32 s  Boo   11.0    9.1   Cl,  L,  vRi,  vmC,  st  11...
 5477   Gx 14 05.6   +54  28 s  UMa    1.7   13.8   vF,  pL
I4367   Gx 14 05.6   -39  12 c  Cen    1.8         eeF,  pS,  R,  bet  2 st
I4372      14 05.7   -10  53 d  Vir                eF,  eS,  E  75deg
I4373   Gx 14 05.7   +25  14 z  Boo          15.  p F,  S,  R,  N,  r
 5479   Gx 14 05.9   +65  41 r  UMi          15.  p eF,  vS,  R,  nearly  bet  2 st
 5463   Gx 14 06.1   +09  22 r  Boo          14.  p eF,  S,  lE
 5465   Gx 14 06.4   -05  32 h  Vir    0.8   15.  p eF,  vS,  sp  5468
 5470   Gx 14 06.4   +06  02 r  Vir          14.  p F,  mE,  vglbM
 5480   Gx 14 06.4   +50  43 s  UMa    1.8   13.  p F,  pS,  vgbM,  np  of  2
 5467    * 14 06.5   -05  29 r  Vir                eF,  vS,  sp  5468
I 973    * 14 06.5   -05  29 F  Vir                stellar  13.5m
 5468   Gx 14 06.6   -05  27 s  Vir    2.5   12.  p F,  L,  R,  vgbM,  *9 sf  4'
I 974    * 14 06.6   -05  31 F  Vir                neb  object  1'.8  sff  of  5465
 5481   Gx 14 06.7   +50  43 s  Boo    1.7   13.  p F,  vS,  smbM,  stellar,  sf  of  2
 5484   Gx 14 06.8   +55  02 s  UMa          16.  p vF,  S,  R,  4' from  5485
 5472   Gx 14 06.9   -05  28 s  Vir    1.4   15.  p pF,  vS,  bet  2 vF  st
 5464   Gx 14 07.1   -30  01 s  Hya    1.0   13.  p pF,  S,  R,  psbM
 5485   Gx 14 07.2   +55  00 s  UMa    2.6   11.5   cB,  R,  vgbM,  f  of  2
I 975      14 07.2   +15  21 d  Boo                vF,  vS,  R
 5486   Gx 14 07.4   +55  06 s  UMa    1.7   14.  p F,  pL
I4374   Gx 14 07.5   -27  01 c  Hya    1.6         eeF,  pS,  R
 5460   OC 14 07.6   -48  19 s  Cen   25.     5.6   Cl,  vL,  vlC,  st  8...
 5488   Gx 14 08.0   -33  18 A  Cen                F,  R,  *8 s nr;  = IC  4375
I4375   Gx 14 08.1   -33  19 c  Cen    3.0         eF,  eS,  eE  15deg  , stell  N,  * sp;  = 5488
 5476   Gx 14 08.2   -06  05 r  Vir          14.  p F,  pS,  iR
 5478   Gx 14 08.2   -01  42 r  Vir          14.  p vF,  vS
 5482   Gx 14 08.4   +08  56 r  Boo          14.  p eF,  S
I 976   Gx 14 08.7   -01  09 u  Vir    1.5   14.  p eF,  vS,  R,  eF,  * att  s
I 977   Gx 14 08.7   -03  00 k  Vir    0.6   15.  p vF,  S,  dif
I 978   Gx 14 09.0   -02  58 k  Vir    0.8   15.  p vF,  S,  R,  bMN
I 979      14 09.3   +14  51 d  Boo                eeF,  pS,  R,  v diffic
 5503   Gx 14 09.4   +60  25 r  UMa          16.  p eeF,  vS,  R,  v diffic,   2 st  nr
 5502    - 14 09.6   +60  26 r  UMa                eeF,  pS,  R,  v diffic,  bet  2 st
 5487   Gx 14 09.7   +08  05 r  Boo          14.  p eF  (place  uncertain)
 5547   Gx 14 09.8   +78  36 r  UMi          14.  p eF,  vS,  E  0deg  +/-
 5490   Gx 14 10.0   +17  33 s  Boo    2.6   13.  p cF,  cS,  R,  sbMF  **
I 982   Gx 14 10.0   +17  42 v  Boo    1.5         vS,  R,  N = 11m
I4380   Gx 14 10.0   +37  33 m  Boo    0.5   14.  p F,  S,  R,  dif
I 983   Gx 14 10.1   +17  44 v  Boo    5.5         eS,  R,  N = 11m
I 984   Gx 14 10.1   +18  22 u  Boo    1.9   14.  p pB,  S,  gbM
 5500   Gx 14 10.2   +48  33 r  Boo          14.  p cF,  cS,  iR
 5483   Gx 14 10.4   -43  19 s  Cen    3.1   12.  p pF,  vL,  R,  vgbM
 5497   Gx 14 10.4   +38  53 r  Boo          15.  p eF,  S,  R,  lbM
I 980      14 10.4   -07  21 d  Vir                F,  S,  R,  N = 13m,  r
 5492   Gx 14 10.5   +19  37 s  Boo    1.8   14.  p pB,  vS,  E
I 981   Gx 14 10.5   -04  10 n  Vir    0.6   15.  p F,  S,  gbM
I4376  *** 14 10.8   -30  49 x  Cen                F,  S,  eE  40deg
I4404      14 10.8   +78  38 d  UNi                eF
 5491   Gx 14 10.9   +06  22 r  Vir          14.  p pB,  pS,  R,  gbM,  r
 5499   Gx 14 10.9   +35  54 r  Boo          14.  p F,  S,  R,  gbM,  r?
 5498   Gx 14 11.0   +25  42 r  Boo          15.  p F,  S,  R,  lbM,  r?
I4381      14 11.0   +25  29 d  Boo                F,  cS,  R,  biN
I4382      14 11.1   +25  30 d  Boo                F,  S,  R,  gbM,  5498  n  11'
I 986      14 11.4   +01  20 d  Vir                F,  S,  N = 13.5,  r
 5493   Gx 14 11.5   -05  03 s  Vir    2.0   11.5   pB,  vS,  R,  psmbM  *,  *18  inv
I 985   Gx 14 11.5   -03  14 m  Vir    0.5   15.  p eF,  eS
I 987   Gx 14 11.5   +19  11 m  Boo    1.2   15.  p eF,  vS,  stellar,  v diffic
 5496   Gx 14 11.6   -01  09 s  Vir    4.4   13.  p pB,  vL,  E  ns
I4384   Gx 14 11.9   +27  07 u  Boo    1.1   15.  p F,  S,  R,  bMN,  r
 5489   Gx 14 12.0   -46  05 t  Cen    1.4         vF,  S,  R,  bM
I4378      14 12.1   -34  16 d  Cen                vF,  vS,  E  150deg
I4379      14 12.1   -34  17 d  Cen                vF,  vS,  E  90deg
I4383      14 12.2   +15  51 d  Boo                1'.7  np  5504  (no  descr)
 5504   Gx 14 12.3   +15  50 r  Boo          14.  p vF,  vlE,  vlbM
 5509   Gx 14 12.3   +24  39 r  Boo                vF,  S,  R,  stellar  Nucl
 5520   Gx 14 12.3   +50  22 r  Boo          13.  p F,  S,  lE,  stellar
 5494   Gx 14 12.4   -30  39 s  Cen    2.2   13.  p pB,  L,  R,  gbM,  rr
 5495   Gx 14 12.4   -27  07 r  Hya          13.  p vF,  S,  R,  bM,  *10  nf
 5501   Gx 14 12.4   +01  16 r  Vir          15.  p vF,  S,  rr
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 5508   Gx 14 12.4   +24  39 r  Boo          15.  p eF,  eS,  R,  lbM
 5505   Gx 14 12.5   +13  18 r  Boo          14.  p vF,  pS,  bet  * and  D*
 5515   Gx 14 12.5   +39  18 r  Boo          13.  p vF,  S,  vlE
 5512   Gx 14 12.6   +30  51 r  Boo          15.  p vF,  vS,  R,  sbMN,  r?
 5517   Gx 14 13.0   +35  42 r  Boo          15.  p F,  eS,  R,  bMN
 5511   Gx 14 13.1   +08  37 r  Boo          15.  p vF,  S,  *10  p
 5506   Gx 14 13.2   -03  13 s  Vir    2.9   13.  p pB,  L,  E 20deg  +/-  , lbM
 5513   Gx 14 13.2   +20  26 r  Boo          14.  p pB,  pL,  iR
 5507   Gx 14 13.3   -03  09 s  Vir    2.0   13.  p cF,  S,  R,  stellar
 5510   Gx 14 13.6   -17  59 r  Vir          14.  p vF,  S,  R,  gbM
 5514   Gx 14 13.6   +07  40 r  Boo          14.  p F,  pS,  R,  lbM,  *16  nf
 5518   Gx 14 13.9   +20  51 r  Boo          15.  p F,  vS,  R,  gbM
 5526   Gx 14 13.9   +57  46 r  UMa          14.  p vF,  S,  E,  r
 5519      14 14.4   +07  26 D  Boo               vF,  pL,  *10  p
 5524   Gx 14 14.5   +36  24 r  Boo          15.  p vF
I 988   Gx 14 14.5   +03  11 z  Vir          15.  p F,  vS,  R
I4385      14 14.7   -42  18 d  Cen               vS,  R,  lbM
 5522   Gx 14 14.8   +15  09 r  Boo          14.  p vF,  vS,  E
 5523   Gx 14 14.8   +25  19 s  Boo    4.5   13.  p F,  pL,  pmE  90deg  , *10  np
 5540   Gx 14 14.8   +60  00 r  UMa          15.  p eF,  vS,  R,  stellar
I 989   Gx 14 14.8   +03  07 u  Vir    1.3   14.  p F,  vS,  R,  bM
I4386   Gx 14 15.0   -43  58 c  Cen    3.1        F,  vS,  R
I4387   Gx 14 15.0   -44  00 c  Cen    1.3        F,  vS,  R
 5527   Gx 14 15.4   +36  11 r  Boo          16.  p eeF
 5521   Gx 14 15.5   +04  24 r  Vir          14.  p F,  S,  R,  bM
 5525   Gx 14 15.6   +14  17 r  Boo          14.  p pF,  pS,  iR,  bM
 5529   Gx 14 15.6   +36  13 s  Boo    5.9   13.  p cF,  pL,  vmE  110deg  , vgvmbM
I 990   Gx 14 15.7   +39  47 m  Boo    0.6   15.  p vF,  S,  dif
 5516   Gx 14 15.8   -48  07 r  Cen               pF,  S,  R,  psbM,  S**   nf
I4392      14 15.9   -13  07 d  Vir               eF,  vS,  mE  80deg  , F* sf,  susp
I4388   Gx 14 16.0   -31  46 m  Cen    0.8   15.  p vF,  vS,  R,  sbM
 5533   Gx 14 16.1   +35  21 s  Boo    3.2   11.8   pB,  R,  vsmbM,  2 or  3 st  inv
 5528   Gx 14 16.2   +08  17 r  Boo          15.  p eeF,  pS,  R,  2 vF  st  nr
 5536   Gx 14 16.3   +39  30 r  Boo          14.  p cF,  vS,  R,  sp  of  2
I4391   Gx 14 16.3   -31  41 m  Cen    0.5   15.  p vF,  vS,  R
 5541   Gx 14 16.4   +39  35 r  Boo          13.  p cF,  S,  R,  gbM,  nf  of  2
I4394      14 16.5   +39  42 d  Boo               eF,  S,  R
I 995   Gx 14 16.6   +57  48 u  UMa    1.4   14.  p eeF,  S,  lE,  v diffic
 5531   Gx 14 16.7   +10  53 r  Boo          14.  p F,  S,  R,  5532  f  10s
I4389      14 16.8   -40  33 d  Cen               vF,  vS,  R,  dif
 5532   Gx 14 16.9   +10  48 s  Boo    1.9   12.0   vF,  vS,  R,  gbM,  r
 5544   Gx 14 17.0   +36  34 s  Boo    1.1   13.  p F,  pS,  E 80deg  , Dneb  or  biN  with  5545
I 996      14 17.0   +57  39 d  UMa               eeF,  S,  mE,  v diffic
I4377   Gx 14 17.0   -75  39 c  Aps    2.6        eeF,  vS,  mE  180deg  , vmbM
I4390   Gx 14 17.0   -44  59 c  Cen    1.7        eF,  vS,  mE  5deg  , stell  N
 5545   Gx 14 17.1   +36  35 s  Boo    1.3   13.  p E,  lbM,  Dneb  or  biN  with  5544
I4395   Gx 14 17.2   +26  51 u  Boo    1.5   15.  p F,  S,  R,  N,  stell
 5561   Gx 14 17.4   +58  44 r  UMa          15.  p eF,  pS,  R,  F*  close  p
 5537   Gx 14 17.5   +07  03 r  Vir          15.  p eeF,  S,  lE
I4396      14 17.5   +28  48 d  Boo               F,  S,  dif
 5535   Gx 14 17.6   +08  11 r  Boo          15.  p eF,  S,  iR
 5538   Gx 14 17.6   +07  29 r  Boo          15.  p eF,  S,  E
 5539   Gx 14 17.6   +08  11 r  Boo          15.  p F,  pL,  iF,  gbM
 5534   Gx 14 17.7   -07  25 s  Vir    1.4   14.  p pF,  st  inv,  *12  np
I 991   Gx 14 17.7   -13  53 m  Vir    1.4   13.  p F,  S
 5542   Gx 14 17.8   +07  33 r  Boo          15.  p vF,  vS
I4393   Gx 14 17.8   -31  21 c  Cen    2.3        cF,  S,  eE  75deg
I4397   Gx 14 17.9   +26  25 u  Boo    1.1   14.  p F,  cS,  R,  bM,  r
 5543   Gx 14 18.0   +07  39 r  Boo          15.  p eF,  vS
 5548   Gx 14 18.0   +25  08 s  Boo    1.9   12.5   cF,  pS,  R,  vsvmbM  *
 5546   Gx 14 18.1   +07  34 r  Boo          14.  p pB,  cS,  gbM
I 993      14 18.1   +11  16 d  Boo               vF,  iF,  diffic
I4398   Gx 14 18.2   +28  51 m  Boo    0.5   15.  p F,  S,  R,  gbM,  r
I 992   Gx 14 18.3   +00  53 u  Vir    1.6   15.  p F,  pS,  R,  *10.5  nf
I 994   Gx 14 18.3   +11  11 u  Boo    1.4   15.  p pB,  vS,  R
I1005      14 18.3   +71  36 d  UMi               F,  S,  R,  bM
I4399   Gx 14 18.3   +26  23 u  Boo    1.2   15.  p F,  cS,  R,  N,  r
I4403   Gx 14 18.3   +31  39 u  Boo    1.4   15.  p F,  S,  R,  gbM,  *14  n
 5550   Gx 14 18.4   +12  52 r  Boo          14.  p vF,  cS,  pmE
 5553   Gx 14 18.4   +26  17 r  Boo          15.  p vF,  S,  lE
 5557   Gx 14 18.4   +36  30 s  Boo    2.4   11.1   cB,  S,  R,  vsbM  *
 5530   Gx 14 18.5   -43  24 s  Lup    4.1   12.  p !,  vF,  pmE,  esvmbM  *12
 5549   Gx 14 18.5   +07  22 r  Vir          14.  p vF,  vS,  R
 5551   Gx 14 18.9   +05  26 r  Vir          15.  p 3 st  in  neby
 5552   Gx 14 18.9   +07  02 r  Vir          15.  p vF,  S
 5555   Gx 14 19.0   -19  08 r  Vir          15.  p vF,  S,  iR,  gbMN
 5559   Gx 14 19.1   +24  48 r  Boo          15.  p vF,  S,  vlE,  bM
 5554   Gx 14 19.2   +07  01 r  Vir          15.  p eF,  S
 5567   Gx 14 19.3   +35  08 r  Boo          15.  p pF,  R
 5568   Gx 14 19.4   +35  05 r  Boo          15.  p vF,  S,  v dif
 5570   Gx 14 19.4   +07  26 r  Boo               F,  S,  iR
 5607   Gx 14 19.4   +71  35 s  UMi    1.1   14.  p pF,  cS,  iR,  bM,  er
I4401   Gx 14 19.4   -04  31 m  Vir    1.0   15.  p vF,  S,  mE  200deg  , nr IC  997
I4405   Gx 14 19.4   +26  16 m  Boo    0.9   15.  p F,  S,  dif
 5572   Gx 14 19.5   +36  08 r  Boo          15.  p eF,  vS,  bM
 5571    - 14 19.6   +35  09 r  Boo               S Cl  of  F  st  in  neb;  = 5579?
I 999   Gx 14 19.6   +17  52 u  Boo    0.8   14.  p F,  vS,  R,  N = 14m,  stellar
 5558    - 14 19.7   +07  02 r  Vir               eF,  S,  lE,  np  of  2
I1000   Gx 14 19.7   +17  51 u  Boo    0.8   14.  p F,  vS,  R,  N = 14m,  stellar
 5585   Gx 14 19.8   +56  44 s  UMa    5.5   10.9   pF,  L,  iR,  vgmbM,  r
I 997   Gx 14 19.9   -04  27 m  Vir    1.0   14.  p pF,  S,  R,  * n
 5560   Gx 14 20.1   +04  00 s  Vir    3.9   12.4   pF,  cL,  E,  gbM
 5562   Gx 14 20.1   +10  15 r  Boo          14.  p vF,  S,  vF*  3s   f
 5563   Gx 14 20.1   +07  03 r  Vir          15.  p eF,  S,  lE
 5564    - 14 20.2   +07  01 r  Vir               eF,  S;  probably  = 5563
 5565    - 14 20.2   +07  00 r  Vir               eF,  S,  v diffic;  probably  = 5563
I 998      14 20.2   -04  28 d  Vir               eeF,  S,  R,  v diffic
 5566   Gx 14 20.3   +03  56 s  Vir    6.5   10.5   B,  pL,  R,  psbM,  r,  *12  f  1'.5
 5569   Gx 14 20.5   +03  59 s  Vir    1.9   15.  p eF,  pL,  R
 5579   Gx 14 20.5   +35  11 r  Boo          14.  p vF,  cL,  p  of  2
 5556   Gx 14 20.6   -29  15 s  Hya    3.1   12.  p eF,  L,  S*  inv
 5573   Gx 14 20.6   +06  54 r  Vir          15.  p vF,  S,  lE
 5580    ? 14 20.7   +35  13 A  Boo               pB,  S,  f  of  2
 5582   Gx 14 20.7   +39  42 r  Boo          13.  p pB,  pS,  R,  bMFN,  * sp
I1001      14 20.7   +05  08 d  Vir               eF,  S,  dif
I1002      14 20.7   +05  11 d  Vir               eF,  vS,  lbM
 5640   Gx 14 20.8   +80  06 r  Cam          15.  p eF,  S,  lE
 5574   Gx 14 20.9   +03  14 s  Vir    1.6   12.4   pF,  pS,  lE,  p  of  2
 5575   Gx 14 20.9   +06  12 r  Vir          14.  p F,  vS,  or  neb*
I1003      14 20.9   +05  27 d  Vir               eF,  vS,  vS  * att,  diffi
I1004      14 20.9   +17  39 d  Boo               pF,  sbM
 5576   Gx 14 21.1   +03  16 s  Vir    3.2   10.9   B,  S,  R,  vsmbM,  f  of  2
 5581   Gx 14 21.1   +23  29 r  Boo          15.  p vF*  in  vF,  vS,  R  neby
 5577   Gx 14 21.2   +03  26 s  Vir    3.4   13.  p pF,  pL,  vmE  53deg
 5578    - 14 21.2   +06  12 r  Vir               vF,  vS,  lE,  mbMN
I4402   Gx 14 21.2   -46  18 c  Lup    3.4        L,  eE  125deg  , pointed  ends
I4408   Gx 14 21.2   +29  59 u  Boo    1.0   15.  p F,  S,  R,  gbM
 5588   D* 14 21.5   +35  07 r  Boo               vF,  R,  gbM
 5589   Gx 14 21.5   +35  15 r  Boo          14.  p vF,  S,  R,  np  of  2
I4409   Gx 14 21.5   +31  35 m  Boo    0.7   15.  p F,  S,  R,  *13.5  close
 5583   Gx 14 21.7   +13  13 r  Boo          14.  p vF,  pS,  R,  pB*  nr
 5590   Gx 14 21.7   +35  11 r  Boo          13.  p cF,  S,  R,  bM  *,  sf  of  2
 5586    - 14 22.1   +13  10 r  Boo               eF,  vS,  R
 5587   Gx 14 22.2   +13  55 s  Boo    2.9   14.  p F,  cS,  vlE,  *8  sf
 5602   Gx 14 22.3   +50  31 r  Boo          13.  p pF,  pS,  lE,  mbM
I4400      14 22.3   -60  35 d  Cen               F,  S,  E
I4410   Gx 14 22.3   +17  23 m  Boo    0.6   16.  p vF,  vS,  R
 5584   Gx 14 22.4   -00  23 s  Vir    3.3   12.  p F,  L,  mE,  dif,  glbM
I4406   Pl 14 22.4   -44  09 s  Lup    0.5   11.  p PN  , stellar,  10  mag,  E  80deg
 5596   Gx 14 22.5   +37  07 s  Boo    1.5   15.  p eF,  S,  R,  stellar
 5598   Gx 14 22.5   +40  19 r  Boo          14.  p F,  vS,  R,  bM
 5620   Gx 14 22.5   +69  34 r  UMi          15.  p eF,  vS
 5591   Gx 14 22.6   +13  43 r  Boo          14.  p eF,  S,  R,  pB*  nr  sf
 5601   Gx 14 22.9   +40  18 r  Boo          15.  p vF,  bet  5598  and  5603
I1006   Gx 14 23.0   +23  47 m  Boo    1.0   15.  p F
I4413   Gx 14 23.0   +37  32 m  Boo    0.2   16.  p F,  S,  R
 5603   Gx 14 23.1   +40  22 r  Boo          14.  p cF,  pS,  R,  gbM
 5594   Gx 14 23.2   +26  15 r  Boo          15.  p eF,  vS,  stellar;  = IC 4412
I4412      14 23.2   +26  16 x  Boo               F,  S,  R,  dif;  = 5594
 5608   Gx 14 23.3   +41  46 s  Boo    2.7   13.  p F,  pL,  lE,  vglbM
I4407      14 23.6   -05  59 F  Vir               no description
 5599   Gx 14 23.7   +06  34 r  Vir          14.  p F,  S,  lE
 5600   Gx 14 23.8   +14  38 s  Boo    1.4   12.7   pB,  pS,  gbM
I4414   Gx 14 23.8   +28  19 m  Boo    0.5   15.  p pB,  cS,  gbMN,  r
 5592   Gx 14 23.9   -28  41 s  Hya    1.7   13.  p F,  S,  E,  gvlbM,  r
 5609   Gx 14 23.9   +34  50 r  Boo               eeF
 5613   Gx 14 24.1   +34  54 s  Boo    1.1   16.  p eF,  pS,  dif,  2' n  of  5614
 5614   Gx 14 24.1   +34  52 s  Boo    2.7   11.7   pB,  S,  R,  smbM
 5595   Gx 14 24.2   -16  43 s  Lib    2.0   12.  p F,  pL,  R,  vgbM,  p  of  2
 5611   Gx 14 24.2   +33  01 r  Boo          13.  p F,  S,  R,  bM
 5615   Gx 14 24.2   +34  52 r  Boo          15.  p close  n  of  5614  (vF*?)
 5616   Gx 14 24.2   +36  26 r  Boo          15.  p vF,  S,  cE,  vgbM,  er
 5610   Gx 14 24.3   +24  36 r  Boo          14.  p vF,  S,  pmE  0deg  +/-  , *9  f
I4415      14 24.4   +16  38 d  Boo               vF,  vS,  R,  lbM
I4416   Gx 14 24.4   +29  37 m  Boo    0.3   16.  p F,  S,  R,  N
 5597   Gx 14 24.5   -16  46 s  Lib    2.0   12.1   vF,  L,  vlE,  vglbM,  f  of  2
I1007   Gx 14 24.6   +04  32 z  Vir          15.  p vF,  vS,  R,  lbM,  *10.5  nr
 5604   Gx 14 24.7   -03  13 r  Vir          14.  p F,  pS,  R,  vgbM*,  r
I4417   Gx 14 24.9   +17  02 m  Boo    0.2   15.  p vF,  vS,  R,  lbM
I1008      14 25.0   +28  20 d  Boo               pF
I4411      14 25.0   -35  01 d  Cen               F,  S,  eE  45deg
 5605   Gx 14 25.1   -13  10 s  Lib    1.8   13.  p vF,  pL,  R,  vgbM
I4418      14 25.3   +25  31 d  Boo               pB,  S,  R,  gbMN
I4420   Gx 14 25.6   +25  22 m  Boo    0.7   15.  p F,  S,  E 220deg  , N
 5593   OC 14 25.8   -54  49 r  Lup               Cl,  vlRi,  vlC,  st  10
I4419      14 25.8   +16  38 d  Boo               F,  vS,  R,  lbM
I4422   Gx 14 26.0   +30  28 m  Boo    0.2   15.  p F,  cS,  r
 5622   Gx 14 26.2   +48  33 r  Boo          14.  p vF,  pS,  vlE,  vglbM
I1009   Gx 14 26.3   +12  21 z  Boo          15.  p vF,  S,  dif
I4423   Gx 14 26.3   +26  15 u  Boo    1.1   15.  p vF,  S,  R,  dif
 5624   Gx 14 26.6   +51  36 r  Boo          14.  p eF,  S,  lE
 5631   Gx 14 26.6   +56  35 s  UMa    2.2   13.  p B,  S,  R,  psbMN
I4425   Gx 14 26.7   +27  12 z  Boo          15.  p F,  S,  R,  dif
 5625   Gx 14 27.0   +39  57 r  Boo          15.  p vF,  S,  R,  gbM
I4427   Gx 14 27.0   +26  51 m  Boo    0.7   15.  p F,  cS,  dif,  r
I4431   Gx 14 27.1   +30  57 u  Boo    1.3   15.  p F,  cS,  R  gbM,  r
 5618   Gx 14 27.2   -02  16 s  Vir    1.8   15.  p eF,  S
 5623   Gx 14 27.2   +33  14 r  Boo          13.  p cF,  S,  R,  vsmbM,  r
I1012      14 27.2   +30  59 d  Boo               no description
 5619   Gx 14 27.3   +04  48 s  Vir    2.5   14.  p vF,  S,  R,  vgbM
I1010   Gx 14 27.3   +01  02 u  Vir    2.3   15.  p F,  S,  dif
I4426   Gx 14 27.3   +16  50 m  Boo    0.4   16.  p F,  vS,  R,  lbM
I4428      14 27.4   +16  12 d  Boo               F,  eS,  R,  lbM
I4437      14 27.4   +41  29 d  Boo               no descr,  *8  nf
 5633   Gx 14 27.5   +46  09 s  Boo    2.3   12.3   cB,  pS,  R,  pglbM
I4424   Gx 14 27.5   +04  49 m  Vir    0.8   15.  p eF,  S,  stellar
I4435   Gx 14 27.5   +37  29 m  Boo    0.5   14.  p F,  R,  sbM  *13.5
 5630   Gx 14 27.6   +41  16 s  Boo    2.5   14.  p F,  S,  E  90deg  +/-  , gbM
 5671      14 27.7   +69  38 D  UMi               vF,  pL,  R,  bM
I4429   Gx 14 27.7   +16  53 m  Boo    0.6   15.  p F,  vS,  R
 5606   OC 14 27.8   -59  38 s  Cen    3.     7.7   Cl,  S,  pC,  st  L  &  S
 5621    - 14 27.8   +08  15 r  Boo               eeF,  L,  r
I1013      14 27.8   +25  50 D  Boo               eF,  vS
I4433      14 27.8   +16  12 d  Boo               F,  vS,  R,  mbM
I4434      14 27.9   +16  13 d  Boo               F,  vS,  R,  lbM
I4436   Gx 14 27.9   +26  29 m  Boo    0.8   15.  p pB,  S,  R,  gbM,  r
I1011   Gx 14 28.1   +01  00 m  Vir    0.4   15.  p F,  vS,  R,  N = 14m
I1017   Gx 14 28.1   +25  52 u  Boo    1.1   15.  p pF,  vS,  sbM,  stellar
I1019   Gx 14 28.1   +25  56 m  Boo    0.4   15.  p F,  vS,  R,  stellar,  * 13  nr
I4421      14 28.1   -37  35 d  Cen               eef,  vS,  R,  F*  f
I4470   OC 14 28.1   +78  54 x  UNi               Cl,  eF,  S;  neb?
 5629   Gx 14 28.3   +25  50 r  Boo          14.  p pF,  S,  R,  gbM
 5632   Gx 14 28.3   -00  12 r  Vir               neb,  *11  f  150s
I1014   Gx 14 28.3   +13  47 s  Boo    2.8   13.  p F,  pL,  R,  vgbM
I1015   Gx 14 28.3   +15  25 m  Boo    0.6   15.  p vF,  iF
I1018   Gx 14 28.3   +25  51 u  Boo    2.3   14.  p eF,  eS,  v diffic
 5628   Gx 14 28.4   +17  55 r  Boo          14.  p pF,  S,  R,  gbMN  = 14m
 5627   Gx 14 28.5   +11  22 r  Boo          14.  p vF,  vS,  R,  *9  sp
 5635   Gx 14 28.5   +27  25 s  Boo    2.6   14.  p F,  S,  E,  sbM
I4438   Gx 14 28.6   +17  21 m  Boo    0.4   16.  p F,  vS,  R,  dif
I4439   Gx 14 28.7   +17  02 z  Boo          16.  p F,  S,  R,  mbM
 5639   Gx 14 28.8   +30  24 r  Boo          14.  p vF,  R,  *7  p,  *11  s
I1016      14 28.8   +04  50 d  Vir               vF,  vS,  R,  f  5619
I1020   Gx 14 28.8   +26  02 u  Boo    1.2   15.  p F,  stellar,  vF*  close
I4442   Gx 14 28.8   +28  57 m  Boo    1.0   15.  p F,  S,  R,  N
 5637   Gx 14 28.9   +23  11 r  Boo          14.  p vF,  S,  R,  vgbM
I4440   Gx 14 29.0   +17  20 m  Boo    0.6   16.  p bM,  mag  15
I4446   Gx 14 29.0   +37  28 m  Boo    0.8   15.  p F,  cS,  R,  dif
 5642   Gx 14 29.2   +30  01 r  Boo          14.  p cF,  S,  * inv,  *12  nf
I1021   Gx 14 29.2   +20  40 u  Boo    1.2   15.  p F,  S,  iR
 5641   Gx 14 29.3   +28  49 s  Boo    2.7   13.  p pB,  pS,  lE,  mbM,  r?
I4443      14 29.3   +16  11 d  Boo               vS,  vlE,  lbM
I4430      14 29.4   -33  37 d  Cen               cF,  cS,  indistinct
 5646   Gx 14 29.5   +35  26 r  Boo          15.  p eF,  E sp  nf,  45°  l
 5634   Gb 14 29.6   -05  59 s  Vir    4.9    9.6   glob.  cl.  , vB,  cL,  R,  gbM,  rrr  st  19,  *8
    sf
I4447      14 29.6   +30  49 d  Boo               F,  S,  R,  gbMN,  r
 5626   Gx 14 29.7   -29  46 r  Hya          15.  p eF,  S,  R
 5636   Gx 14 29.7   +03  16 s  Vir    1.9   15.  p eF,  cL,  R,  np  of  2
 5638   Gx 14 29.7   +03  14 s  Vir    2.6   11.3   cB,  pL,  R,  sf  of  2
 5712   Gx 14 29.7   +78  51 r  UMi          15.  p vF,  S,  R,  S Cl  p
 5617   OC 14 29.8   -60  43 s  Cen   10.     6.3   Cl,  L,  pRi,  pCM,  st  8...
 5660   Gx 14 29.8   +49  37 s  Boo    2.8   11.8   pB,  L,  iR,  vgbM
I1027      14 29.8   +53  57 D  Boo               eeF,  pS,  R,  *13  sp  0'.7
I4432      14 29.8   -39  32 d  Cen               vF,  vS,  mE  85deg
 5654   Gx 14 29.9   +36  21 r  Boo          14.  p F,  S,  E?,  **   inv?
I1022   Gx 14 30.0   +03  46 u  Vir    1.2   15.  p vF,  E ns
 5653   Gx 14 30.2   +31  13 s  Boo    1.8   12.2   pF,  pS,  R,  bM
 5644   Gx 14 30.4   +11  55 r  Boo          14.  p pB,  pS,  R,  gmbM
 5656   Gx 14 30.4   +35  19 s  Boo    2.1   13.  p pF,  pL,  R,  mbM,  r
 5667   Gx 14 30.4   +59  29 s  Dra    1.8   13.  p pB,  pS,  E  0deg
 5647   Gx 14 30.6   +11  52 r  Boo          15.  p F,  S,  R,  vlbM
 5648   Gx 14 30.6   +14  00 r  Boo          14.  p vF,  S,  no  Nucl;  = 5649
 5649   Gx 14 30.6   +14  00 D  Boo          14.  p eF,  vS,  np  of  2
 5645   Gx 14 30.7   +07  17 s  Vir    2.6   12.3   cF,  pL,  iR,  gbM
 5657   Gx 14 30.7   +29  10 r  Boo          14.  p F,  S,  irr,  sev  vF  st  inv,  r?
 5650   Gx 14 30.8   +06  00 h  Vir    0.2   15.  p vF,  pS,  R
 5652   Gx 14 30.9   +05  58 r  Vir          14.  p pB,  pL,  vlE,  bM
 5655   Gx 14 31.0   +13  59 r  Boo               eeF,  sf  of  2
 5659   Gx 14 31.1   +25  21 r  Boo          15.  p eF
I1026    * 14 31.2   +31  13 x  Boo               pB
 5651    - 14 31.3   -00  56 r  Vir               neb,  R
I4449      14 31.3   +15  15 d  Boo               vF,  vS,  R,  dif
I1024   Gx 14 31.4   +03  00 u  Vir    1.6   14.  p pB,  vS,  E ns
I4441      14 31.4   -43  31 d  Lup               pF,  pS,  R
 5673   Gx 14 31.5   +49  58 s  Boo    2.6   14.  p F,  S,  cE,  *15  np
I1025   Gx 14 31.5   +07  04 z  Vir          15.  p eF,  sbM
I4444   Gx 14 31.7   -43  25 s  Lup    1.9   12.  p vF,  vS,  * M,  spir  or  annular
 5661   Gx 14 31.9   +06  14 r  Vir          14.  p vF,  pS,  iE
I4445      14 31.9   -46  02 d  Lup               F,  cS,  E 160deg
 5678   Gx 14 32.1   +57  55 s  Dra    3.2   12.  p B,  L,  lE  0deg  , vgmbM
I4450   Gx 14 32.1   +28  33 u  Boo    1.2   15.  p F,  cS,  dif,  *10.5  nf
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 5658   Gx 14 32.4   +00  16 r  Vir         14.  p neb,  F,  E
 5665   Gx 14 32.4   +08  05 s  Boo    2.1  13.  p pB,  pL,  R,  gbM,  r
I1023      14 32.4   -35  48 d  Cen          neb
I4452   Gx 14 32.4   +27  26 z  Boo         15.  p F,  S,  R,  gbM,  r
I1028      14 32.5   +41  51 d  Boo              pB,  S,  R,  F* close  nf
I1029   Gx 14 32.5   +49  54 v  Boo    3.0       vF,  S,  lE,  mbN
 5672   Gx 14 32.6   +31  40 s  Boo    1.0  13.6  vF,  vL,  iR,  lbM,  **   p
 5675   Gx 14 32.6   +36  17 r  Boo         14.  p F,  pS,  E,  bM
 5643   Gx 14 32.7   -44  10 s  Lup    4.6  11.  p pB,  L,  R,  vglbM,  st inv
 5669   Gx 14 32.7   +09  53 s  Boo    4.1  12.  p F,  L,  R,  lbM,  r
 5676   Gx 14 32.8   +49  28 s  Boo    3.9  10.9   B,  L,  E 45deg  +/- , pgbM,  r
 5666   Gx 14 33.1   +10  29 r  Boo         13.  p vF,  vS,  R,  stellar
I4454      14 33.3   +17  43 d  Boo              F,  eS,  R,  lbM
 5668   Gx 14 33.4   +04  27 s  Vir    3.3  11.5   F,  pS,  vlE,  *14  inv
 5664      14 33.7   -14  35 D  Lib              pF,  S,  E,  gbM
I1030      14 33.7   +31  42 d  Boo              pF
 5674   Gx 14 33.8   +05  26 r  Vir         13.  p cF,  pS,  R,  gbM
 5663   Gx 14 33.9   -16  34 r  Lib         15.  p eF,  vS,  R,  glbM
 5612   Gx 14 34.1   -78  24 s  Aps    2.0  13.  p vF,  E,  gbM,  r
I4456      14 34.1   +16  11 d  Boo              F,  S,  R,  dif
 5677   Gx 14 34.2   +25  27 r  Boo         15.  p vF,  vS,  R,  r,  3 st 9,  10  np
I4453   Gx 14 34.5   -27  31 c  Hya    2.0       pB,  eS,  R,  F* close
I4455      14 34.5   -14  38 d  Lib              eF,  cS,  cE  30deg
I4457      14 34.5   +18  13 d  Boo              F,  vS,  R,  lbM
I4459   Gx 14 34.5   +30  58 m  Boo    0.5  15.  p F,  pL,  E ns,  glbM,  r
I1031      14 34.6   +48  02 d  Boo              eeF,  S,  R
I4451   Gx 14 34.6   -36  17 c  Cen    1.9       vF,  vS,  R,  * n 0'.5
I4460   Gx 14 34.6   +30  17 m  Boo    0.7       F,  S,  dif,  glbM
I1032      14 34.7   +47  57 d  Boo              eeF,  S,  R
 5682   Gx 14 34.8   +48  40 s  Boo    2.0  14.0   F,  pS,  E
I1033      14 34.8   +47  56 d  Boo              eeF,  S,  R
 5683   Gx 14 34.9   +48  40 v  Boo    0.7  14.8   F,  vS,  lE
 5687   Gx 14 34.9   +54  29 s  Boo    2.6  11.8   pF,  S,  iF,  r,  *10  f
 5679   Gx 14 35.0   +05  20 r  Vir         14.  p vF,  S,  R,  *12  att
I4461      14 35.0   +26  31 d  Boo              F,  vS,  R,  N,  r
I4462      14 35.0   +26  32 d  Boo              F,  S,  R
 5662   OC 14 35.2   -56  33 s  Cen   12.     5.5  Cl,  L,  pRi,  lC,  st  9...
 5689   Gx 14 35.5   +48  45 s  Boo    3.7  11.9   cB,  pL,  E  87deg  ,  psmbM
 5670   Gx 14 35.7   -45  57 t  Lup    2.0       vF,  S,  cE,  bet  2 st
 5681   Gx 14 35.7   +08  18 r  Boo         14.  p F,  S
 5680   Gx 14 35.8   -00  03 r  Vir         15.  p vF,  vS
 5684   Gx 14 35.8   +36  32 r  Boo         14.  p F,  cS,  R,  bM,  p of  2
I4463   Gx 14 35.8   +16  02 z  Boo         15.  p F,  vS,  R
I4465      14 35.9   +15  34 d  Boo              vF,  vS,  lE  180deg
 5686   Gx 14 36.0   +36  29 r  Boo         15.  p vF,  S,  R,  f of  2
 5685   Gx 14 36.2   +29  54 r  Boo         15.  p vF,  vS,  R,  gbMN  = 15m
 5693   Gx 14 36.2   +48  35 s  Boo    1.9  15.  p F,  pL,  *13  att  s
I4471      14 36.4   +41  40 x  Boo              no  description;  = 5697
 5697   Gx 14 36.6   +41  41 r  Boo         14.  p F,  vS,  R,  bM,  4  B  st  p;  = IC  4471
I4466      14 36.7   +18  20 d  Boo              F,  vS,  lE
I4467   Gx 14 36.8   +18  21 z  Boo         15.  p F,  vS,  R,  lbM
 5696   Gx 14 37.0   +41  49 r  Boo         14.  p cF,  cS,  R,  lbM,  r
 5700   Gx 14 37.1   +48  33 r  Boo         15.  p eF,  S,  r,  *11  sp  4'
 5698   Gx 14 37.2   +38  28 r  Boo         14.  p cF,  cS,  lE,  in  triangle  of  st
I1034   Gx 14 37.2   +14  40 z  Boo         16.  p vF,  lbM
I4458      14 37.2   -39  28 d  Cen              eF,  eS,  E  100deg
 5695   Gx 14 37.3   +36  34 r  Boo         14.  p pB,  cS,  R,  bM,  r
I4469   Gx 14 37.3   +18  15 u  Boo    1.6  16.  p F,  pL,  eE  110deg
 5707   Gx 14 37.5   +51  34 s  Boo    2.8  13.  p B,  pS,  R
 5690   Gx 14 37.7   +02  17 s  Vir    3.5  13.  p vF,  mE  138deg  ,  F* att sf,  *7  p  4'
I1046   Gx 14 37.8   +69  00 m  UMi    0.8  15.  p eF,  S,  R,  D*  f
I4464   Gx 14 37.8   -36  53 c  Cen    1.6       vF,  S,  R,  N,  wisp  at  45deg
 5691   Gx 14 37.9   -00  24 s  Vir    2.0  13.  p pB,  pS,  lE,  gbM
 5704    - 14 37.9   +40  31 r  Boo              F,  cS,  lE  0deg  +/-
I4473   Gx 14 37.9   +15  50 m  Boo    0.5  15.  p vS,  com,  170deg
I1035   Gx 14 38.1   +09  20 m  Boo    0.7  15.  p pF,  vS,  R,  S,  * nr
 5714   Gx 14 38.2   +46  38 s  Boo    3.0  14.  p vF,  pS,  E pf,  D* n,  1st  of  6
 5692   Gx 14 38.3   +03  24 s  Vir    0.9  13.  p pB,  vS,  R,  gbM
 5699    - 14 38.3   +29  30 r  Boo              eF,  vS;  = 5706?
 5708   Gx 14 38.3   +40  28 r  Boo         14.  p F,  pL,  E  0deg  +/- ,  gbM
I1036   Gx 14 38.3   +18  07 z  Boo         16.  p pF,  S
 5720   Gx 14 38.4   +50  52 r  Boo         14.  p eeF,  pS,  R,  bet  2 st
I1037   Gx 14 38.4   +18  10 m  Boo    0.8  15.  p F,  vS,  R,  stellar
I4468   Gx 14 38.4   -22  22 c  Lib    2.3       F,  pL,  cE  160deg  ,  cbM
I4474      14 38.4   +23  26 d  Boo              F,  vS,  R,  N
I4475   Gx 14 38.4   +23  20 z  Boo         15.  p F,  vS,  N,  stell
 5703    - 14 38.5   +29  30 r  Boo              vF,  vS,  iR;  = 5709?
I4477   Gx 14 38.5   +28  27 z  Boo         15.  p F,  vS,  dif,  *12  p  2s  ,  15"  n
 5706   Gx 14 38.6   +30  29 r  Boo         15.  p vF,  vS,  R,  vlbM
 5717   Gx 14 38.6   +46  41 r  Boo         15.  p vF,  S,  R,  D*  nr,  2nd  of  6
I4479   Gx 14 38.7   +28  30 u  Boo    1.5  15.  p F,  cS,  N,  dif
 5702   Gx 14 38.8   +20  31 r  Boo         14.  p vF,  vS
 5709   Gx 14 38.8   +30  27 r  Boo         14.  p vF,  S,  iF,  E pf
 5721   Gx 14 38.9   +46  41 r  Boo         15.  p vF,  S,  R;  forms  trapez  with  5722- 4
 5723   Gx 14 38.9   +46  41 r  Boo         15.  p vF,  S,  R
 5722   Gx 14 39.0   +46  40 r  Boo         15.  p vF,  S,  R,  psbM
 5724   Gx 14 39.1   +46  44 r  Boo         17.  p vF,  S,  R;  F neb  connecting  5721- 4?
 5701   Gx 14 39.2   +05  22 s  Vir    4.7  12.  p cB,  pS,  R,  mbN,  *11  p  15s
I4478   Gx 14 39.2   +15  53 z  Boo         15.  p bM,  mag  15
 5710   Gx 14 39.3   +20  03 r  Boo         14.  p vF,  S,  vgbM,  **   f,  p of  2
 5711   Gx 14 39.4   +20  00 r  Boo         15.  p eF,  vS,  **   att,  f of  2
I1038   Gx 14 39.4   +11  55 z  Boo         15.  p F,  vS,  stellar,  *10  f  8s
 5688   Gx 14 39.5   -45  02 t  Lup    3.9       F,  S,  vgbM,  am  st
 5694   Gb 14 39.6   -26  32 s  Hya    3.6  10.2   cB,  cS,  R,  psbM,  r,  *9.5  sp
I1049      14 39.6   +62  02 D  Dra              eeF,  pS,  R
 5705   Gx 14 39.8   -00  43 s  Vir    2.8  14.  p eF,  L,  lE,  eF  dif  neby  around
I4480   Gx 14 39.8   +18  29 m  Boo    0.5  15.  p F,  S,  R,  dif,  * in  M
I4476      14 39.9   -16  14 d  Lib              neb,  *7  nf  5'
 5731   Gx 14 40.0   +42  46 r  Boo         14.  p vF,  eS,  lE
I4481      14 40.1   +16  08 d  Boo              eF,  vS,  R,  dif
I4482   Gx 14 40.1   +18  57 z  Boo         15.  p F,  S,  R
 5713   Gx 14 40.2   -00  17 s  Vir    2.8  11.4   cB,  pL,  R,  psmbM,  r
I4472   Gx 14 40.2   -44  19 c  Lup    1.8       L,  eE  180deg  ,  bet  2 st ns,  doubtful
 5730      14 40.3   +42  45 D  Boo              vF,  cS,  E  90deg  +/-
I1040   Gx 14 40.3   +09  28 z  Boo         15.  p eF,  vS
I4483   Gx 14 40.3   +16  41 u  Boo    1.6  15.  p E  200deg  ,  lbM
 5727   Gx 14 40.5   +33  59 s  Boo    2.3  14.  p eF,  pL,  R,  dif
I1039   Gx 14 40.5   +03  25 z  Vir         16.  p vF,  vS,  lbM
I4448   Gx 14 40.5   -78  49 c  Aps    1.0       !!  F,  vS,  annul,  * in  M
I4485      14 40.5   +28  40 d  Boo              F,  S,  dif
 5732   Gx 14 40.6   +38  39 r  Boo         14.  p vF,  S,  R,  lbM
I1041      14 40.6   +03  21 d  Vir              pB,  vS,  R,  N  =  12m
I1042      14 40.6   +03  26 d  Vir              vF,  vS,  R,  bM,  close  D with  5718
I1043      14 40.7   +03  21 d  Vir              vF,  vS,  R,  bM
I1045      14 40.7   +42  45 d  Boo              eeF,  pS,  R,  nearly  bet  2 st
 5718   Gx 14 40.8   +03  28 r  Vir         14.  p vF,  S,  R,  vglbM,  *8- 9  nf
 5719   Gx 14 40.9   -00  19 s  Vir    3.4  14.  p pF,  S,  lE,  bM
 5716   Gx 14 41.1   -17  29 s  Lib    1.9  13.  p vF,  pL,  R
 5725   Gx 14 41.1   +02  10 r  Vir         14.  p vF,  S,  disc,  *15  s  95"
I1044   Gx 14 41.5   +09  26 m  Boo    1.0  15.  p F,  vS,  R,  gbM
I4486   Gx 14 41.9   +18  33 m  Boo    0.7  16.  p vF,  vS,  R,  dif
 5729   Gx 14 42.0   -09  03 s  Lib    3.0  13.  p F,  pL,  E,  r
I4487      14 42.0   +18  37 d  Boo              F,  eS,  R,  lbM
 5728   Gx 14 42.4   -17  15 s  Lib    2.8  11.3   pF,  pL,  pmE  45deg  +/- ,  mbM,  *10  s
 5735   Gx 14 42.4   +28  44 r  Boo         14.  p vF,  L,  iR,  lbM
I1047   Gx 14 42.4   +19  10 m  Boo    0.6  16.  p vF,  S,  v,  dif
 5739   Gx 14 42.5   +41  50 s  Boo    2.2  13.  p pB,  S,  R,  smbM,  r,  * nr
I4492      14 42.6   +37  25 d  Boo              F,  vS,  R,  N,  stell
 5733   Gx 14 42.8   -00  21 s  Vir    1.3  15.  p vF,  S,  mE
I4488      14 42.8   +18  36 d  Boo              vF,  eS,  R,  lbM
 5726      14 42.9   -18  26 D  Lib              F,  S,  R,  gbM,  *10.5  np  3'

I1048   Gx 14 42.9   +04  53 s  Vir    2.5  14.  p pB,  pL,  E pf,  r
 5737   Gx 14 43.2   +18  53 r  Boo         14.  p vF,  cS,  R,  vglbM
I4489      14 43.2   +18  31 d  Boo              vF,  eS,  R,  lbM
 5715   OC 14 43.4   -57  33 s  Cir    6.   10.  p Cl,  L,  pRi,  CM,  st  11...13
 5736   Gx 14 43.5   +11  13 r  Boo         15.  p eeF,  S,  lE,  v diffic
 5744   Gx 14 43.9   -10  29 A  Lib              eF,  vS,  neb?
 5751   Gx 14 43.9   +53  25 r  Boo         14.  p F,  S,  vlE,  triangle  2 st  10- 11
I4496   Gx 14 43.9   +33  23 m  Boo    0.3  15.  p F,  S,  R,  N
 5738   Gx 14 44.0   +01  37 r  Vir         14.  p F,  S,  bM
I1050   Gx 14 44.1   +18  01 z  Boo         15.  p vF,  S,  R,  dif
I1051   Gx 14 44.2   +19  01 z  Boo         15.  p F,  vS,  stellar
I1052   Gx 14 44.2   +20  37 u  Boo    1.1  15.  p neb  *12
I4495   Gx 14 44.2   +23  33 z  Boo         16.  p vF,  vS,  R
I4497   Gx 14 44.3   +28  32 m  Boo    0.6  15.  p F,  S,  R,  N,  r,  *12.5  f  5s
 5740   Gx 14 44.4   +01  41 s  Vir    3.1  11.9   pB,  L,  iR,  gbM,  r
 5747   Gx 14 44.4   +12  09 r  Boo         14.  p eF,  S;  = IC  4493
I4493      14 44.4   +12  07 x  Boo              eF,  S,  R,  dif,  rM;  = 5747
I4491      14 44.5   -13  44 d  Lib              F,  S,  eE  0deg
I4494   Gx 14 44.5   +15  30 m  Boo    1.0  15.  p vF,  vS,  R,  dif
I4500   Gx 14 44.6   +37  29 m  Boo    0.3  15.  p F,  S,  R,  gbM
 5746   Gx 14 44.9   +01  57 s  Vir    7.9  10.6   B,  L,  vmE  170deg  ,  bmBN
 5748   Gx 14 45.0   +21  55 r  Boo         15.  p eF,  vS
I4498   Gx 14 45.0   +26  17 m  Boo    0.4  15.  p F,  S,  R,  gbM
 5734   Gx 14 45.1   -20  52 r  Lib         14.  p vF,  S,  lE,  glbM
 5743   Gx 14 45.1   -20  54 r  Lib         13.  p F,  S,  mE,  smbMN
 5745   Gx 14 45.1   -13  56 r  Lib         14.  p vF,  S,  E,  psbM
 5752   Gx 14 45.3   +38  43 r  Boo         14.  p F,  1' p  5754
I4502      14 45.3   +37  18 d  Boo              F,  S,  dif r,  *14  vnr
 5753   Gx 14 45.4   +38  43 r  Boo         15.  p F,  bM,  np  5754
 5754   Gx 14 45.4   +38  47 r  Boo         14.  p cF,  cS,  R,  bM
I4490      14 45.4   -36  10 d  Cen              oval,  around  2 st  9.5  &  10
 5755   Gx 14 45.5   +38  46 r  Boo         15.  p F,  2' nf  5754
I1053   Gx 14 45.6   +16  57 m  Boo    0.5  15.  p eF,  vS,  v dif,  *4  p  28s
 5742   Gx 14 45.8   -11  48 r  Lib         14.  p F,  pS,  pmE,  gbMN
I1056   Gx 14 45.8   +50  25 u  Boo    2.0  14.  p eeF,  L,  R,  3 pB  st sf
I1057      14 46.0   +50  22 d  Boo              eF,  pS,  R,  bet  3 st
 5741   Gx 14 46.1   -11  54 r  Lib         15.  p vF,  vS,  R,  sbMN
 5750   Gx 14 46.2   -00  13 s  Vir    2.9  11.6   pF,  pS,  vlE,  r
I1054   Gx 14 46.5   +01  16 u  Vir    1.2  15.  p vF,  vS,  sbMN  = 14m
I4504   Gx 14 46.5   +31  42 z  Boo         15.  p F,  S,  R,  N,  r
I4503   Gx 14 46.6   +16  06 m  Boo    0.8  15.  p F,  vS,  R
I4505      14 46.6   +33  24 d  Boo              F,  S,  R,  N
I4506      14 46.7   +33  24 d  Boo              vF,  vS,  N
 5758   Gx 14 47.1   +13  40 r  Boo         15.  p eF,  pS,  R,  *9  f  22s
 5759   Gx 14 47.3   +13  28 r  Boo         15.  p eF,  S,  R
I1055   Gx 14 47.4   -13  44 v  Lib    2.6       F,  pL,  E ns
I4501   Gx 14 47.5   -22  25 m  Lib    0.9  14.  p vF,  S,  indistinct
 5756   Gx 14 47.6   -14  51 s  Lib    2.0  13.  p pB,  pL,  pmE,  gpmbM
 5760   Gx 14 47.7   +18  31 r  Boo         14.  p vF,  vS,  cE  90deg  ,  vglbM
I4484   Gx 14 47.7   -73  18 c  Aps    2.5       eF,  eE  140deg  ,  susp
I4507   Gx 14 47.7   +18  27 m  Boo    0.8  16.  p vF,  eS,  R
 5757   Gx 14 47.8   -19  05 s  Lib    2.1  13.  p vF,  S,  iR,  lbM
I4508   Gx 14 47.8   +31  47 z  Boo         15.  p F,  S,  R,  sbM  *14
I4509   Gx 14 48.4   +31  48 u  Boo    1.0  15.  p F,  cS,  iF,  r
 5762   Gx 14 48.7   +12  28 r  Boo         14.  p vF,  S,  R,  p of  2
 5749   OC 14 48.9   -54  31 s  Lup    8.    9.  p Cl,  pL,  pRi,  lC,  st  10...11
 5763   Gx 14 49.0   +12  29 r  Boo         15.  p eeF,  pS,  v diffic,  f of  2
 5761   Gx 14 49.1   -20  22 r  Lib         14.  p vF,  S,  R,  glbMN
I1058   Gx 14 49.1   +17  02 u  Boo    1.6  15.  p F,  E ns,  mbMN  = 14m
I1065   Gx 14 49.3   +63  16 s  Dra    1.3  13.4   vF,  pS,  R
 5767   Gx 14 49.7   +47  23 r  Boo         15.  p eF,  pS,  R,  * nr
I4512      14 49.9   +27  42 d  Boo              vF,  S,  R
I1059   Gx 14 50.7   -00  52 z  Lib         16.  p F,  S,  lbm,  r
I4510      14 50.7   -20  44 d  Lib              vF,  vS,  iR,  susp
 5765   Gx 14 50.8   +05  07 r  Vir         14.  p Dneb,  both  eF
I4514      14 50.9   +27  37 d  Boo              F,  S,  R,  N,  *13  vnr
I1069      14 51.0   +54  23 d  Boo              pF,  vS,  R,  no st  nr
I4515      14 51.1   +37  36 d  Boo              F,  S,  R,  gbM,  r
I1061      14 51.2   +18  45 d  Boo              eF,  eS,  diffic
 5777   Gx 14 51.3   +58  58 s  Dra    3.3  14.  p vF,  vS,  lE
I1062   Gx 14 51.3   +18  41 m  Boo    0.3  15.  p pF,  iF,  diffic
 5772   Gx 14 51.7   +40  36 s  Boo    2.3  14.  p pB,  pL,  lE,  psbM,  *8  np
I1060   Gx 14 51.9   -07  13 m  Lib    1.0  14.  p no  descr
I1074   Gx 14 52.0   +51  17 u  Boo    1.0  15.  p eeF,  S,  R
 5768   Gx 14 52.1   -02  32 s  Lib    2.0  13.  p F,  R,  bMFN,  S* s
I4511      14 52.1   -40  30 d  Cen              cS,  R,  lbM,  dif
 5771   Gx 14 52.2   +29  51 r  Boo         14.  p vF,  S,  R,  pgbM
 5779   Gx 14 52.2   +55  54 r  Dra         15.  p vF,  pS,  lE,  lbM
I1063      14 52.2   +04  41 d  Vir              pF,  stellar
I1064      14 52.2   +04  40 d  Vir              vF,  vS,  R,  lbM
I4513      14 52.3   -20  44 d  Lib              F,  S,  vE  80deg
 5773   Gx 14 52.5   +29  48 r  Boo         14.  p vF,  S,  R,  pgbM
 5769   Gx 14 52.6   +07  56 r  Boo         15.  p vF
I1066   Gx 14 53.0   +03  18 u  Vir    1.6  14.  p F,  vS,  R
I1067   Gx 14 53.1   +03  20 v  Vir    2.3       F,  vS,  R,  bM
 5766   Gx 14 53.2   -21  22 r  Lib         14.  p eF,  pS,  R,  gbM
 5788   Gx 14 53.2   +52  03 r  Boo         15.  p eeF,  S,  R,  v diffic,  sf of  2
 5770   Gx 14 53.4   +03  57 r  Vir         13.  p cF,  S,  vlE,  bM,  biN
 5783   Gx 14 53.5   +52  05 s  Boo    3.0  13.  p pB,  pS,  iR,  F* inv
I1068   Gx 14 53.5   +03  04 m  Vir    0.2  15.  p F,  pL,  dif
 5764   OC 14 53.6   -52  41 s  Lup    2.   13.  p Cl,  vF,  vS,  vC
 5774   Gx 14 53.7   +03  35 s  Vir    3.2  12.2   pF,  pL,  R,  np of  2
 5808      14 53.8   +73  01 D  UMi              vF,  S,  iR,  bet  2 st
 5785    - 14 53.9   +52  09 r  Boo              vF,  pS,  F* close  f,  np of  2
I1070   Gx 14 53.9   +03  29 z  Vir         15.  p vF,  S,  R,  diffic
I4516      14 53.9   +16  23 d  Boo              vF,  pS,  R
 5775   Gx 14 54.0   +03  33 s  Vir    4.3  11.4   F,  pS,  vmE  148deg  ,  gvlbM
 5819   Gx 14 54.0   +73  08 r  UMi         14.  p F,  pL,  triangle  2 st
 5784   Gx 14 54.2   +42  33 r  Boo         13.  p pB,  S,  R,  smbM,  stellar
I1071   Gx 14 54.2   +04  45 u  Vir    1.2  14.  p vF,  S,  R,  bM
I1072   Gx 14 54.2   +04  51 m  Vir    0.5  15.  p vF,  vS,  R,  vlbM,  2nd  of  3
I1073   Gx 14 54.2   +04  48 z  Vir         15.  p vF,  S,  R,  S* s,  3rd  of  3
 5780   Gx 14 54.4   +28  57 r  Boo         14.  p vF,  S,  R,  * nr  sp
 5778   Gx 14 54.5   +18  38 r  Boo         15.  p eeF,  pS,  R,  pB*  close  f,  diffic
I4517   Gx 14 54.5   +23  38 z  Boo         15.  p F,  S,  N  dif
 5776   Gx 14 54.6   +02  58 r  Vir         14.  p vF,  pL,  vlbM,  *8- 9  sp
I1075   Gx 14 54.8   +18  06 u  Boo    1.3  15.  p eeF,  pS,  R,  v diffic
I4519   Gx 14 54.8   +37  25 m  Boo    0.6  15.  p F,  S,  dif,  *14  sp
I1076   Gx 14 55.0   +18  02 v  Boo    1.2       eF,  pS,  R,  bM,  * sp
I4520   Gx 14 55.1   +33  43 m  Boo    0.4  15.  p F,  vS,  R,  N,  r
 5787   Gx 14 55.3   +42  30 s  Boo    1.2  14.  p F,  cS,  R,  psbM
I1083   Gx 14 55.6   +68  24 m  UMi    0.7  16.  p eeF,  S,  R
 5794   Gx 14 55.7   +49  44 r  Boo         14.  p pF,  S,  vsbM  *13,  1st  of  4
 5804   Gx 14 55.7   +49  39 r  Boo              vF,  vS,  vsmbM,  *6  nr
 5807   Gx 14 55.7   +63  55 r  Dra         15.  p vF,  vS,  r
 5782      14 55.9   +11  53 D  Boo              eF,  vS,  E,  * nr  sf
 5805   Gx 14 55.9   +49  43 r  Boo              S
 5795   Gx 14 56.3   +49  23 r  Boo         14.  p vF,  pS,  lE,  pB*  close  to  p end
 5797   Gx 14 56.3   +49  42 r  Boo         13.  p F,  S,  vsbM  *13,  2nd  of  4
I1078      14 56.5   +09  21 d  Boo              pF,  vS,  R,  lbM
 5781   Gx 14 56.6   -17  15 r  Lib         14.  p F,  S,  R,  bM,  *16  sp
 5789   Gx 14 56.6   +30  13 r  Boo         14.  p eF,  pS,  iF
I1079      14 56.6   +09  22 d  Boo              F,  vS,  R,  gbM
I1077   Gx 14 57.4   -19  13 c  Lib    2.0       vF,  vS,  R,  gbMN
 5790   Gx 14 57.5   +08  17 r  Boo         15.  p eF,  vS,  iF,  lbM
 5798   Gx 14 57.7   +29  58 r  Boo         13.  p F,  S,  R,  vgbM,  * nf
I4518   Gx 14 57.7   -43  08 c  Lup    1.4       eS,  R;  also  one  pL,  eE  100deg
 5832   Gx 14 57.8   +71  41 s  UMi    4.0  12.  p pB,  cL,  iR,  bp,  r
I1080   Gx 14 58.1   -06  42 m  Lib    0.4  14.  p vF,  vS,  R,  lbM
 5792   Gx 14 58.4   -01  05 s  Lib    7.2  12.  p pB,  pL,  R,  mbM,  *8- 9  np  1'
 5820   Gx 14 58.7   +53  53 s  Boo    2.5  11.9   B,  E  90deg  +/- ,  sbM,  B D* f  8'
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 5791   Gx 14 58.8   -19 16 s  Lib    2.4   13.  p pF,  S, R,  stellar
 5818   Gx 14 58.8   +49 49 r  Boo          15.  p vF,  pS,  R,  eF* inv,  bet  2 st
 5821   Gx 14 58.9   +53 55 r  Boo          15.  p vF,  S
I1081   Gx 14 58.9   -19 14 c  Lib    1.6          eF,  pL,  E 175deg
I1082   Gx 14 58.9   +07 00 z  Vir          15.  p pF,  S,  R
 5786   Gx 14 59.0   -42 01 r  Cen                F,  mE,  B* sf
 5793   Gx 14 59.4   -16 42 s  Lib    1.8   13.2   eF,  pS,  E,  bMN
 5796   Gx 14 59.4   -16 37 s  Lib    1.9   13.  p F,  pS* in centre
 5836   Gx 14 59.5   +73 53 r  UMi          15.  p eF,  vS,  lE,  2 st inv
 5817   Gx 14 59.6   -16 11 r  Lib          15.  p vF,  pS
I4521   Gx 14 59.6   +25 35 m  Boo    0.5   15.  p F,  cS,  E pf,  gbM
 5826    - 14 59.8   +55 31 r  Dra                vF,  pL,  E
 5806   Gx 15 00.0   +01 54 s  Vir    3.1   11.6   cB,  cL,  E 165deg  +/- ,  sbMN
I4499   Gb 15 00.3   -82 13 s  Aps    7.6   10.6   Cl,  vF,  4' diam;  3 F st in neb?
 5801   Gx 15 00.4   -13 54 r  Lib                vF,  vS,  sbM,  1st  of  3
 5802   Gx 15 00.5   -13 55 r  Lib                vF,  vS,  sbM,  2nd  and  brightest
 5811   Gx 15 00.5   +01 37 s  Vir    1.0   15.  p vF,  S,  iR
 5815   Gx 15 00.5   -16 50 r  Lib          14.  p eF,  pS,  E 10deg  , D* inv
 5828   Gx 15 00.6   +49 59 r  Boo          14.  p eF,  pS,  R,  bet  2 dist  st
 5809   Gx 15 00.9   -14 10 r  Lib          14.  p vF,  S,  E,  glbM
 5803      15 01.0   -13 54 D  Lib                vF,  vS,  sbM,  3rd  of  3
 5812   Gx 15 01.0   -07 27 s  Lib    2.4   11.2   cB,  S,  R,  svnbM
 5813   Gx 15 01.2   +01 42 s  Vir    3.6   10.7   B,  pS,  R,  psmbM
I1084   Gx 15 01.3   -07 27 m  Lib    0.4   14.  p eF,  S,  R,  dif
 5814   Gx 15 01.4   +01 37 r  Vir          14.  p vF,  vS,  R
I4528   Gx 15 01.4   +49 07 m  Boo    0.7   15.  p eF,  pS,  dif,  r
 5830   Gx 15 01.7   +47 52 r  Boo          15.  p vF,  S,  R,  B* nr f
 5827   Gx 15 01.8   +25 58 s  Boo    1.4   14.  p pB,  pL,  R,  bM
 5800    - 15 02.0   -51 55 r  Lup                Cl,  pL,  pRi,  lC
 5825    - 15 02.0   +18 42 r  Boo                eeF,  pS,  lE,  pB* close  f
 5816    - 15 02.1   -16 08 r  Lib                F,  pS,  gbMN,  stellar
I4524   Gx 15 02.1   +25 35 z  Boo          16.  p F,  S,  iF,  gbM,  r
 5835   Gx 15 02.3   +48 52 r  Boo          15.  p vF,  pS,  R
I4525   Gx 15 02.4   +25 38 z  Boo          16.  p vF,  cS,  dif
 5810   Gx 15 02.6   -17 53 r  Lib          14.  p eF,  vS,  lE 230deg  ,  bet  2 vF  st
I4526      15 02.6   +23 22 d  Boo                vF,  vS,  N
 5829   Gx 15 02.7   +23 20 s  Boo    1.9   15.  p vF,  vL,  irrR,  bM
I1085   Gx 15 02.7   +17 14 m  Boo    1.2   15.  p pB,  vS,  lE  ns
I1086      15 03.4   +17 05 d  Boo                F,  iR,  bMN
I1090   Gx 15 03.7   +42 41 v  Boo    0.4          eF,  neb?
I4530   Gx 15 03.8   +26 05 u  Boo    1.0   15.  p F,  S,  dif,  *13.5  nf
 5824   Gb 15 04.0   -33 04 s  Lup    6.2    9.0   pB,  S,  stell,  N
 5834      15 04.0   -33 04 D  Lup                eeF?  B,  stellar;  = 5824
 5831   Gx 15 04.1   +01 13 s  Vir    2.2   11.5   pB,  S,  mbM
 5840    - 15 04.3   +29 30 r  Boo                eeF,  pS,  lE,  v diffic
I4531   Gx 15 04.4   +23 24 z  Boo          16.  p F,  vS,  R,  N
I4533   Gx 15 04.4   +27 48 u  Boo    1.0   15.  p F,  S,  iF,  *10.5  f
I4532      15 04.5   +23 13 d  Boo                vF,  N,  stellar
 5837   Gx 15 04.7   +12 38 r  Boo          14.  p vF,  S,  R,  D* np
 5842   Gx 15 04.8   +21 04 r  Boo          15.  p eF,  vS,  R,  lbM
 5822   OC 15 05.2   -54 21 s  Lup   40.     7.  p Cl,  vL,  Ri,  lC,  st  9...12
I4523   Gx 15 05.2   -43 31 c  Lup    2.0          bM,  mag  14
 5838   Gx 15 05.4   +02 06 s  Vir    4.2   10.8   pB,  pS
 5799   Gx 15 05.5   -72 26 r  Aps                eF,  S,  R,  bM
 5839   Gx 15 05.5   +01 38 s  Vir    1.4   14.  p pF,  pS
 5841    - 15 05.6   +01 59 r  Vir                F,  S,  E
 5823   OC 15 05.7   -55 36 s  Cir   10.     7.9   Cl,  cL,  Ri,  lCM,  st  13...14
I4527   Gx 15 05.7   -42 27 c  Lup    1.5          cS,  E 225deg  , bM
 5853   Gx 15 05.8   +39 31 r  Boo          15.  p pF,  pS,  R,  mbM,  r?
 5845   Gx 15 06.0   +01 38 s  Vir    0.9   12.3   vF,  R
 5862   Gx 15 06.0   +55 34 r  Dra          15.  p eF,  pS,  R,  v diffic
 5847   Gx 15 06.3   +06 23 r  Vir          15.  p eF,  S,  iR
I1100   Gx 15 06.3   +63 00 u  Dra    1.0   14.  p vF,  pS,  lE,  bet  2 st
 5846   Gx 15 06.4   +01 36 s  Vir    3.4   10.2   vB,  pL,  R,  psbMN,  F* inv  s,  rr
 5867    - 15 06.4   +55 44 r  Dra                eF,  vS,  stellar
I1098    * 15 06.4   +55 36 x  Dra                vF  (only  a *13?)
I4529   Gx 15 06.4   -43 14 c  Lup    0.6          bM,  mag  14
 5866   Gx 15 06.5   +55 46 s  Dra    5.2   10.0   vB,  cL,  pmE  146deg  , gbM
 5860   Gx 15 06.6   +42 38 s  Boo    1.0   14.  p F,  S,  R,  psbM
 5870   Gx 15 06.6   +55 28 r  Dra          15.  p eF,  pS,  lE,  v diffic,  * f
 5848   Gx 15 06.7   +02 00 r  Vir          15.  p eF,  S,  close  D* sf  7'
I1087      15 06.7   +03 46 d  Vir                vF,  vS
I1088      15 06.7   +03 46 d  Vir                eeF,  vS
 5849   Gx 15 06.9   -14 36 r  Lib          15.  p *13  in  vF  neb,  3 st  p  1s  ,  *8  f  10s  ,  15'  s
 5851   Gx 15 06.9   +12 52 r  Boo          15.  p eF,  vS,  np  of  2
I1099   Gx 15 06.9   +56 31 v  Dra    1.4          eeF,  pS,  R,  bet  2  F st
 5852   Gx 15 07.0   +12 51 r  Boo          14.  p eF,  vS,  sf  of  2
 5850   Gx 15 07.1   +01 33 s  Vir    4.3   11.0   cF,  S,  lE,  psbM
 5856    - 15 07.3   +18 27 r  Boo                neb  *6  (??)
I1089   Gx 15 07.4   +07 08 z  Vir          15.  p eF,  vS,  R
 5843   Gx 15 07.5   -36 20 c  Lup    2.0          vF,  S,  lE,  vlbM,  r
 5857   Gx 15 07.5   +19 36 s  Boo    1.4   13.1   cF,  cS,  E,  p  of  Dneb
I1092   Gx 15 07.5   +09 23 z  Boo          15.  p vF,  vS,  R
 5859   Gx 15 07.6   +19 35 s  Boo    3.0   12.4   pF,  pS,  E,  f  of  Dneb
I1093   Gx 15 07.7   +14 33 u  Boo    1.0   15.  p pB,  vS,  R,  lbM
I1094   Gx 15 07.7   +14 38 m  Boo    0.5   15.  p pB,  vS,  R,  biN
 5854   Gx 15 07.8   +02 34 s  Vir    2.7   11.8   pB,  S,  vlE,  lbM,  am  st
 5855   Gx 15 07.9   +03 58 r  Vir          15.  p eF,  S,  R,  2  st  nf
 5874   Gx 15 07.9   +54 45 s  Boo    2.5   14.  p vF,  pL,  R,  in  triangle  of  3  B  st
I1091   Gx 15 08.2   -11 09 v  Lib    1.4          vF,  S,  dif
I4534      15 08.2   +23 42 d  Boo                pB,  S,  E  ns,  N
I1095      15 08.5   +14 01 d  Boo                eeF,  S,  lE
I1096   Gx 15 08.5   +19 11 u  Boo    1.1   15.  p vF,  S,  dif
I1097   Gx 15 08.5   +19 11 u  Boo    1.1   15.  p vF,  vS,  R,  lbM
I4535      15 08.7   +37 34 d  Boo                F,  S,  dif,  *14  sp
 5858   Gx 15 08.8   -11 13 s  Lib    1.4   14.  p F,  S,  stell  N,  5861  sf
 5881      15 09.1   +62 57 d  Dra                pF,  cS,  R,  vgbM  (place?)
 5875   Gx 15 09.2   +52 32 s  Boo    2.6   13.  p pB,  pL,  lE
 5861   Gx 15 09.3   -11 19 s  Lib    3.0   12.  p F,  L,  E,  r
 5876   Gx 15 09.5   +54 30 s  Boo    2.6   14.  p F,  S,  R,  mbM
 5864   Gx 15 09.6   +03 03 s  Vir    2.8   13.  p pF,  cS,  ilE,  gbM,  *14  f
 5879   Gx 15 09.8   +57 00 s  Dra    4.4   11.5   cB,  S,  E,  mbMRN,  r
 5865   Gx 15 09.9   +00 31 A  Vir          15.  p eF,  5869  s 3'
 5868      15 09.9   +00 31 A  Vir                eF,  5869  s 3';  = 5865
 5869      15 09.9   +00 28 F  Vir          13.  p pF,  S,  E,  psbM
 5871    * 15 10.1   +00 31 F  Vir                eF,  forms  trapez  with  3  neb  p
 5844      15 10.7   -64 41 r  TrA                pB,  pL,  R,  vgvlbM
 5863   Gx 15 10.8   -18 27 r  Lib          14.  p *12  in  eF  neb,  S,  R
I1101      15 10.9   +05 46 D  Vir                eF,  vS,  *13  f  1s  .5,  *13  p  2s
 5872   Gx 15 11.0   -11 30 r  Lib          14.  p vF,  S,  R,  vmbN,  *13  nf  0'.5
I1102   Gx 15 11.1   +04 18 u  Vir    1.2   15.  p eeF,  vS,  F*  sf,  v  diffic
I1114      15 11.3   +75 27 d  UMi                vF;  only  a  *13?
 5909   Gx 15 11.5   +75 22 A  UMi          14.  p vF,  vS
I4522   Gx 15 11.5   -75 52 c  Aps    2.9          vF,  vS,  cbM,  st  inv
I1103      15 11.6   +19 12 d  Ser                vF,  S
 5894   Gx 15 11.7   +59 49 s  Dra    3.3   13.  p pF,  pS,  E  0deg  +/-
 5912   Gx 15 11.7   +75 22 A  UMi          14.  p vF,  vS
 5833   Gx 15 11.8   -72 52 r  Aps                F,  cS,  lE,  glbM,  am  st
I1110   Gx 15 12.1   +67 22 u  UMi    1.3   15.  p eeF,  S,  mE
 5886   Gx 15 12.7   +41 13 r  Boo          15.  p F,  vS,  R,  bM
 5873   Pl 15 12.8   -38 08 s  Lup    0.1   13.  p PN  ,  stellar  =  9.5  mag
 5877  *** 15 12.8   -04 56 F  Lib                vF,  S,  *12  att  n
I1104    * 15 12.8   -05 05 F  Lib                vF
 5888   Gx 15 13.1   +41 16 s  Boo    1.5   14.  p cF,  vS,  R,  bM,  r
 5884      15 13.2   +31 52 D  Boo                only  2  F  st  (pos  170deg  ,  dist  7")
I4536   Gx 15 13.2   -18 08 c  Lib    2.6          vF,  L,  R,  F*  att  np,  F*  nr  sf
 5889   Gx 15 13.3   +41 20 s  Boo    0.9   16.  p eeF,  glbM
I1105      15 13.3   +04 16 d  Ser                eeF,  S,  lE,  F*  np
 5893   Gx 15 13.6   +41 58 s  Boo    1.4   14.  p F,  S,  R,  r,  3  st  nr
 5892   Gx 15 13.7   -15 30 r  Lib          13.  p eF,  L,  gbM
 5878   Gx 15 13.8   -14 16 s  Lib    3.5   11.5   pB,  pL,  pmE  0deg  ,  psmbM,  *  inv
 5895   Gx 15 13.8   +41 59 r  Boo          15.  p vF,  S,  E  ns,  apparently  conn  with  5896
 5896   Gx 15 13.8   +41 59 r  Boo          15.  p vF,  vS,  R
I1106   Gx 15 14.0   +04 43 z  Ser          15.  p vF,  vS,  R,  gbM
I1107   Gx 15 14.2   +04 43 z  Ser          15.  p F,  vS,  R,  gbM
 5902   Gx 15 14.4   +50 21 r  Boo          15.  p vF,  vS,  stellar
I1111      15 14.4   +54 32 d  Boo                pB,  S,  R,  2  st  nr
 5887   Gx 15 14.8   +01 08 r  Ser          15.  p pF,  pS,  gbM
 5899   Gx 15 15.0   +42 03 s  Boo    3.0   11.8   cB,  pL,  pmE,  smbMN
 5880   Gx 15 15.1   -14 34 F  Lib          15.  p eF,  vS,  R,  bM,  in  field  with  5883
 5885   Gx 15 15.1   -10 05 s  Lib    3.5   11.7   F,  cL,  R,  vgbM
 5900   Gx 15 15.1   +42 13 s  Boo    1.6   15.  p vF,  S,  vlE,  gbM
 5901    * 15 15.1   +42 12 r  Boo                close  n  of  5900,  eF,  S
 5883   Gx 15 15.2   -14 37 D  Lib                vF,  pS,  stellar  N
 5905   Gx 15 15.4   +55 31 s  Dra    4.2   12.  p pF,  pS,  iR
 5906   Gx 15 15.8   +56 20 h  Dra    0.5   14.  p a  ray,  vmE,  par  to  5907  and  close  p  it
 5907   Gx 15 15.9   +56 19 s  Dra   12.3   10.4   cB,  vL,  vmE  155deg  ,  vg,  psbMN
 5891   Gx 15 16.3   -11 31 r  Lib          14.  p vF,  pS,  lE,  gbM,  *11  f
 5908   Gx 15 16.7   +55 25 s  Dra    3.2   11.9   pF,  pS,  R
 5882   Pl 15 16.8   -45 39 s  Lup    0.1   11.  p PN  ,  vS,  R,  quite  sharp
I1108      15 16.8   -45 39 d  Lup                stellar,  gaseous  spectrum
I1109   Gx 15 17.1   +05 15 z  Ser          15.  p eeF,  pS,  R,  *  nf,  v  diffic
 5897   Gb 15 17.4   -21 01 s  Lib   12.6    8.6   glob.  cl.  ,  pF,  L,  viR,  vgbN,  rrr
I4537   Gx 15 17.5   +02 02 z  Ser          16.  p eF,  vS,  R,  bM
 5890   Gx 15 17.9   -17 35 r  Lib          14.  p vF,  vS,  E 235deg
I1112   Gx 15 17.9   +07 13 z  Ser          15.  p eeF,  pS,  R
 5898   Gx 15 18.2   -24 06 s  Lib    1.7   11.5   F,  S,  R,  gbM
I1113   Gx 15 18.3   +12 29 m  Ser    0.6   15.  p eF,  *12  nr
I4539   Gx 15 18.5   +32 24 m  CrB    0.4   15.  p F,  S,  R,  vlbM
 5903   Gx 15 18.6   -24 04 s  Lib    2.0   11.5   cF,  S,  R,  gpmbM
 5904   Gb 15 18.6   +02 05 s  Ser   17.4    5.8   !!,  glob.  cl.  ,  vB,  L,  eCN,  st  11...15;  =
    M5
 5914   Gx 15 18.7   +41 52 r  Boo          15.  p F,  vS,  R,  F  st  inv
 5910   Gx 15 19.3   +20 55 r  Ser          15.  p vF,  S,  er
 5918   Gx 15 19.3   +45 54 r  Boo          14.  p cF,  L,  pmE,  glbM,  **  s
I4540      15 20.1   +01 47 d  Ser                vF,  pS,  mE,  B*  nr
 5911   Gx 15 20.4   +03 32 r  Ser          14.  p vF,  vS,  2  S  st  inv
 5913   Gx 15 20.9   -02 35 r  Ser          14.  p vF,  pL,  vlE,  r
 5922   Gx 15 21.2   +41 40 h  Boo    0.5   15.  p eF,  S
 5923   Gx 15 21.2   +41 43 s  Boo    2.0   15.  p vF,  pL,  vlE,  vgbM
I4538   Gx 15 21.2   -23 39 c  Lib    2.6          eeF,  vL
 5917   Gx 15 21.4   -07 22 r  Lib          14.  p eF,  vS,  psbM
 5919   Gx 15 21.5   +07 44 r  Ser          15.  p eeF,  pS,  lE,  np  of  2
 5915   Gx 15 21.6   -13 06 s  Lib    1.6   12.  p B,  S,  R,  glbM,  p  of  2
 5916   Gx 15 21.6   -13 10 s  Lib    2.9   14.  p F,  S,  lE,  glbM,  f  of  2
 5920   Gx 15 21.8   +07 42 s  Ser    1.4   13.6   eeF,  pS,  lE,  sf  of  2
 5921   Gx 15 21.9   +05 04 s  Ser    4.9   10.8   cB,  cL,  iR,  vsbM  *12,  am  st
 5924   Gx 15 21.9   +31 14 r  CrB          15.  p neb*,  vF,  S,  F*  close  s
I1116   Gx 15 21.9   +08 26 m  Ser    1.2   15.  p eeF,  S,  R
I4542      15 22.1   +33 10 d  Boo                F,  S,  R,  N,  *12  sp
I1115    * 15 22.4   -04 28 F  Lib                only  a  D*,  12.5  &  13.5,   dist  5"
 5926   Gx 15 23.4   +12 42 r  Ser          15.  p F,  vS,  2  st  nr
I1117      15 24.4   +15 27 d  Ser                F,  vS,  R,  lbM
I4543   Pl 15 24.6   +13 29 x  Ser                eF,  pS,  vF*  nr  np
 5939   Gx 15 24.8   +68 45 r  UMi          13.  p pB,  pS,  lE
I1118   Gx 15 25.1   +13 26 m  Ser    0.8   15.  p pB,  vS,  R,  S*  nr
I1119   Gx 15 25.7   -03 39 m  Ser    0.5   15.  p F,  pS,  R,  *11.5  nf
 5928   Gx 15 25.9   +18 05 r  Ser          14.  p pB,  cS,  R,  psbM,  *7  n
 5929   Gx 15 26.1   +41 40 s  Boo    1.1   13.  p vF,  vS,  sp  of  Dneb
 5930   Gx 15 26.1   +41 41 s  Boo    2.0   13.  p pF,  pS,  R,  nf  of  Dneb
I1120      15 26.2   +18 52 d  Ser                eF,  eS,  vF,  *  att
 5932   Gx 15 26.8   +48 37 r  Boo          15.  p vF,  pS,  R,  np  of  2
 5933   Gx 15 27.0   +48 37 r  Boo          15.  p eeF,  vS,  R,  sf  of  2
I4546   Gx 15 27.0   +28 51 m  CrB    0.6   15.  p F,  vS,  R,  *13  att
I4547   Gx 15 27.3   +28 48 z  CrB          15.  p F,  S,  R,  N,  r
I4548      15 27.4   +28 51 d  CrB                vF,  S,  iF,  r
 5925   OC 15 27.7   -54 31 s  Nor   15.     8.  p Cl,  vL,  vRi,  lC,  st  11...14
I1121   Gx 15 27.8   +06 49 z  Ser          16.  p eeF,  eS,  stellar,  vF*  close
 5927   Gb 15 28.0   -50 40 s  Lup   12.0    8.3   glob.  cl.  ,  cB,  L,  R,  vgbM,  rrr,  st  15
 5949   Gx 15 28.0   +64 46 s  Dra    2.4   13.  p F,  S,  lE  45deg  +/- ,  vglbM
 5934   Gx 15 28.2   +42 55 r  Boo          14.  p F,  S,  irr,  lE  ns,  2  S  st  inv
 5935   Gx 15 28.3   +42 56 r  Boo          15.  p *13- 14  seems  slightly  nebs
I1123      15 28.9   +42 53 d  Boo                vF,  eS,  stellar
I4549   Gx 15 29.2   +32 50 m  Boo    0.5   15.  p F,  cS,  E pf
I4544      15 29.4   -50 35 d  Nor                PN  ,  stellar
 5931   Gx 15 29.5   +07 35 r  Ser          15.  p eF,  pL,  R
I1122   Gx 15 29.5   +07 35 m  Ser    0.2   15.  p vF,  pS,  mbM,  *11  p  1'
I1139   Gx 15 29.6   +82 36 z  UMi          16.  p eeF,  S,  lE,  v  diffic
 5943   Gx 15 29.8   +42 47 r  Boo          14.  p vF,  pS,  dif
 5945   Gx 15 29.8   +42 55 r  Boo          14.  p pF,  pL,  gmbM,  S*  att  np
I4541   Gx 15 29.9   -70 35 c  Aps    2.0          eF,  vS,  mE  150deg  ,  susp
 5936   Gx 15 30.0   +12 59 s  Ser    1.5   12.4   F,  pL,  iR,  vgbM,  r
I1124      15 30.0   +23 38 D  Ser                pB,  cS,  E  250deg  ,  N
 5947   Gx 15 30.7   +42 43 r  Boo          15.  p vF,  S,  dif
I1143   Gx 15 30.7   +82 28 v  UMi    1.8          pF,  vS,  R,  *  nr
 5937   Gx 15 30.8   -02 49 r  Ser          13.  p pB,  pS,  R,  vgbM,  3  st  f
 5940   Gx 15 31.2   +07 28 r  Ser          14.  p eF,  pS,  R,  F*  p,  1st  of  4
 5941   Gx 15 31.5   +07 20 r  Ser          15.  p eeF,  S,  R,  2nd  of  4
 5950   Gx 15 31.5   +40 26 r  Boo          15.  p vF,  S,  R,  S*  np
 5942   Gx 15 31.6   +07 18 r  Ser          15.  p eeF,  S,  R,  3rd  of  4
 5944   Gx 15 31.7   +07 19 r  Ser          15.  p eeF,  S,  R,  4th  of  4
I1129   Gx 15 32.0   +68 15 u  UMi    1.2   14.  p vF,  pS,  iR,  D*  nf
 5948    - 15 32.9   +03 59 r  Ser                F*  in  vF  neby,  vF*  close
I1125   Gx 15 33.1   -01 38 u  Ser    1.7   14.  p F,  pL,  R,  dif
 5963   Gx 15 33.5   +56 35 s  Dra    3.5   12.  p pF,  pS,  iF
 5951   Gx 15 33.7   +15 00 s  Ser    3.5   13.  p F,  pS,  E  150deg  +/-
I4551      15 33.9   +06 01 x  Ser                eeF,  L,  R,  v  dif;  = 5964
 5965   Gx 15 34.0   +56 42 s  Dra    5.4   13.  p cF,  cL,  lE
 5953   Gx 15 34.5   +15 12 s  Ser    2.0   13.  p pB,  cS,  p  of  Dneb
 5954   Gx 15 34.6   +15 12 s  Ser    1.3   14.  p pB,  cS,  f  of  Dneb
I4557   Gx 15 34.6   +39 44 z  Boo          16.  p F,  vS,  N
 5958   Gx 15 34.7   +28 40 r  CrB          13.  p pF,  pL,  iR,  bM,  r
 5952   Gx 15 34.8   +04 57 r  Ser          15.  p eF,  vS,  alm  stell;  = IC 1126
I4550      15 34.8   -50 39 d  Nor                B,  pS,  lE
 5969   Gx 15 34.9   +56 28 r  Dra          15.  p eS,  R,  stellar
 5956   Gx 15 35.0   +11 45 r  Ser          13.  p F,  S,  R,  *16  close  f
I1126      15 35.0   +05 00 x  Ser                *13,  nebulous?;  = 5952
I4552      15 35.0   +04 42 d  Ser                eF,  pS,  R
I4553   Gx 15 35.0   +23 29 s  Ser    2.0   14.  p F,  S,  R,  gbM
 5955   Gx 15 35.1   +05 04 r  Ser          15.  p eF,  vS,  stellar
I4554      15 35.1   +23 28 d  Ser                vF,  vS,  N,  stell
 5961   Gx 15 35.2   +30 51 s  CrB    0.8   14.  p pF,  S,  E pf
 5957   Gx 15 35.4   +12 03 s  Ser    3.0   13.  p pB,  pL,  com,  lbM
 5946   Gb 15 35.5   -50 40 s  Nor    7.1    9.6   glob.  cl.  ,  cB,  pL,  R,  vglbM,  rrr,  st  16
I4556   Gx 15 35.5   +25 19 m  Ser    0.4   15.  p F,  S,  R,  N
 5971   Gx 15 35.6   +56 29 r  Dra          15.  p eeF,  vS,  R,  lbM
 5966   Gx 15 35.8   +39 47 r  Boo          14.  p vF,  S,  R,  gbM,  2  st  8  f
I4558      15 35.8   +25 21 d  Ser                vF,  vS
I4560      15 35.8   +39 51 d  Boo                vF,  vS;  5966  sf
I1127      15 35.9   +23 29 d  Ser                pF
I4559      15 35.9   +25 21 d  Ser                F,  vS,  R,  N
I4562   Gx 15 36.0   +43 29 v  Boo    1.5          pB,  S,  R,  mbM,  F*  or  neb  1'  nf
I4563   Gx 15 36.0   +39 50 m  Boo    0.7   14.  p vF,  vS,  N
 5960   Gx 15 36.2   +05 40 r  Ser          15.  p vF,  S,  neb*
 5938   Gx 15 36.4   -66 52 c  TrA    2.8          F,  S,  am  st
 5962   Gx 15 36.5   +16 37 s  Ser    2.8   11.4   pF,  pL,  ilE,  gbM
I4564      15 36.6   +43 31 d  Boo                pF,  R,  gbM
I4565   Gx 15 36.6   +43 25 u  Boo    1.0   15.  p F,  R,  gbM
I4566   Gx 15 36.7   +43 33 v  Boo    2.0          pF,  R,  gbM
 5976   Gx 15 36.8   +59 23 v  Dra    1.0   14.8   eeF,  S,  R
I4561   Gx 15 36.9   +25 25 m  Ser    0.3   15.  p F,  vS,  R,  N
 5959   Gx 15 37.4   -16 37 r  Lib          14.  p vF,  pS,  vlE,  bMN
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I4567      15 37.5   +43  16 d  Boo                pF,  R, gbM
 5964   Gx 15 37.6   +05  59 s  Ser    4.2   13.  p eF,  vL,  R, vgbM,  r; = IC 4551?
I1130   Gx 15 37.8   +17  15 m  Ser    0.6   15.  p vF  (another  2' sp?),  *8.7  f
 5981   Gx 15 37.9   +59  23 s  Dra    2.8   13.0   F,  mE
I1128      15 37.9   -01  33 d  Ser                pF,  pS,  R
 5970   Gx 15 38.5   +12  11 s  Ser    3.0   11.4   pF,  pL,  R,  rr
 5982   Gx 15 38.7   +59  21 s  Dra    2.9   11.1   cB,  S,  R,  psbM,  r
 5972   Gx 15 38.8   +17  02 r  Ser          15.  p F,  pS,  irrR
I1131   Gx 15 38.9   +12  05 v  Ser    1.0           pF,  vS,  R,  stellar,  5970  np
 5974   Gx 15 39.0   +31  45 s  CrB    0.5   14.  p vF,  vS,  R,  bM
 5985   Gx 15 39.6   +59  20 s  Dra    5.5   11.0   pB,  cL,  iE,  r
 5968   Gx 15 39.9   -30  33 s  Lup    2.2   13.  p vF,  L,  R,  gbM,  r
 5987   Gx 15 39.9   +58  05 s  Dra    4.7   13.  p pF,  cS
 5975   Gx 15 40.0   +21  28 r  Ser                14.  p vF,  vS,  irrR,  sev  vF st inv
I1132   Gx 15 40.0   +20  40 m  Ser    1.1   14.  p no  descr
I4568   Gx 15 40.1   +28  09 z  CrB          15.  p F,  S,  R,  N
 5973   Gx 15 40.2   -08  37 r  Lib                F,  S,  iR
 5977   Gx 15 40.4   +17  07 r  Ser          15.  p eF,  S,  R,  lbM
I4569   Gx 15 40.8   +28  17 m  CrB    0.5   15.  p pB,  D *13  in  S neb
I1133   Gx 15 41.2   +15  34 u  Ser    1.3   15.  p pB,  pL,  iF
I4570   Gx 15 41.3   +28  14 u  CrB    1.0   15.  p F,  cS,  R
 5980   Gx 15 41.4   +15  47 s  Ser    2.1   13.  p F,  pS,  E  0deg
 5989   Gx 15 41.5   +59  45 r  Dra          13.  p vF,  vS
I4545   Gx 15 41.5   -81  38 c  Aps    2.0           eeF,  eS,  mE  145deg  , bet  2 vF  st,  susp
I4572   Gx 15 41.9   +28  07 m  CrB    0.9   15.  p pB,  cS,  gbM,  dif,  r
I4574   Gx 15 42.0   +28  15 z  CrB          16.  p pF,  S,  R
I4573   Gx 15 42.2   +23  48 z  Ser          16.  p F,  vS,  dif,  r
I4575      15 42.3   +23  48 d  Ser                F,  S,  dif,  r,  *15  att
 5978   Gx 15 42.4   -13  14 r  Lib          14.  p eF,  vS,  sbMN,  am  st
I4576   Gx 15 42.6   +23  41 z  Ser          15.  p F,  vS,  R,  N,  *14  np
 5983   Gx 15 42.7   +08  14 r  Ser          15.  p eF,  eS,  R,  vlbM
I4577      15 42.7   +23  47 d  Ser                F,  S,  R,  gbM,  r
I4579      15 42.8   +23  46 d  Ser                F,  S,  R,  gbM,  r
 5984   Gx 15 42.9   +14  14 s  Ser    3.0   13.  p pB,  S,  E  135deg  +/-  , bM
I4580   Gx 15 43.2   +28  22 z  CrB          15.  p F,  S,  R
I4581   Gx 15 44.0   +28  17 z  CrB          15.  p F,  S,  iF,  *12.5  nr
 5992   Gx 15 44.4   +41  05 s  Boo    1.1   14.  p vF,  vS,  R,  bM,  sp  of  2
 5993   Gx 15 44.5   +41  07 r  Boo          14.  p cF,  vS,  R,  bM,  nf  of  2
 5988   Gx 15 44.6   +10  17 r  Ser          15.  p eeF,  pS,  R,  F*  nr  n
I1134   Gx 15 44.9   +16  58 m  Ser    0.4   15.  p vF,  vS,  dif
 5991   Gx 15 45.3   +24  37 r  Ser          14.  p pF,  S,  R,  mbM
I1135   Gx 15 45.6   +17  42 m  Ser    0.6   15.  p vF,  vS,  R
I4582   Gx 15 45.7   +28  06 u  CrB    1.4   15.  p F,  S,  E  pf,  gbM,  *12.5  f  6s  .5
 5986   Gb 15 46.1   -37  47 s  Lup    9.8    7.1   !,  glob.  cl.  , v8,  L,  R,  vgbM,  st  13...15
I1145      15 46.2   +72  27 d  UMi                eeF,  pS,  R,  6011  nr
 5990   Gx 15 46.4   +02  24 r  Ser          13.  p vF,  vS,  R,  gbM
I4583   Gx 15 46.4   +23  49 m  Ser    0.8   15.  p F,  vS,  E,  N,  r
 6011   Gx 15 46.6   +72  09 r  UMi          14.  p vF,  S,  E  90deg  +/-  , vS*  f
 5994   Gx 15 46.8   +17  51 r  Ser          15.  p S,  sp  5996
 5996   Gx 15 46.9   +17  52 r  Ser          13.  p pF,  cS,  R,  r,  bet  2 D  st
 5997   Gx 15 47.4   +08  19 r  Ser          15.  p eF,  eeS,  stell
I1136   Gx 15 47.6   -01  33 z  Ser          15.  p F,  eS,  stellar
 5979   Pl 15 47.7   -61  13 s  TrA    0.1           !,  PN  ,  pF,  vS,  R,  r?  am  150  st
 6001   Gx 15 47.7   +28  38 r  CrB          14.  p vF,  S,  R
 6002   Gx 15 47.7   +28  37 m  CrB    0.2   17.  p neb  100"  s  of  6001
 5967   Gx 15 48.1   -75  40 s  Aps    2.9   12.  p F,  pL,  R,  vgbM
I1138   Gx 15 48.2   +26  12 u  CrB    1.0   15.  p vF,  S,  iF,  lbM,  r
I4555   Gx 15 48.3   -78  11 c  Aps    1.9           vF,  vS,  eE  55deg  , bM
 5995   Gx 15 48.4   -13  47 r  Lib          14.  p eF,  S,  R,  vS*  p
I1146   Gx 15 48.5   +69  23 m  Dra    0.9   14.  p vF,  pS,  R,  2  st  nr,  sp  of  2
I1137      15 48.9   +08  35 d  Ser                vF,  S,  R,  *9  close  np
I4571   Gx 15 48.9   -67  19 c  TrA    1.4           cF,  cS,  mE  155deg
I1140      15 49.1   +19  04 d  Ser                vF  (S  Cl?),  *9.5  close
 6003   Gx 15 49.3   +19  01 r  Ser          14.  p F,  vS,  S*  inv
 5998    - 15 49.4   -28  36 r  Sco                Cl,  pL,  pRi,  st  vS
I1142      15 49.4   +18  09 d  Ser                vF,  dif
I1141      15 49.6   +12  24 d  Ser                vF,  vS,  R
 6000   Gx 15 49.9   -29  24 t  Sco    1.9           vF,  S,  R,  sbM
I1147   Gx 15 50.1   +69  33 m  Dra    0.4   15.  p eeF,  S,  R,  nf  of  2
 6004   Gx 15 50.3   +18  56 r  Ser          13.  p vF,  pL,  lE,  lbM
I1144   Gx 15 51.3   +43  25 m  Her    0.6   15.  p eeF,  vS,  R,  *  sf
 6015   Gx 15 51.4   +62  19 s  Dra    5.4   11.2   B,  mE
 5999   OC 15 52.2   -56  28 s  Nor    5.     9.  p Cl,  L,  pRi,  st  12...14
 6019   Gx 15 52.3   +64  51 r  Dra          15.  p eeF,  S,  R,  v  diffic
I1154   Gx 15 52.5   +70  23 u  UMi    1.8   15.  p vF,  pS,  R
 6008   Gx 15 52.9   +21  08 r  Ser          14.  p vF,  R,  pL,  bM
 6013   Gx 15 52.9   +40  39 r  Her          14.  p eF,  vS,  iR,  lbM
 6006   Gx 15 53.0   +12  02 r  Ser          15.  p vF,  S
 6024   Gx 15 53.2   +64  56 r  Dra          15.  p pF,  pS,  R,  bM,  *  close
I4578   Gx 15 53.2   -74  50 c  Aps    2.1           eF,  eS,  cE  140deg  , bet  2 vF  st
 6007   Gx 15 53.4   +11  57 s  Ser    1.9   14.  p F,  pL
 6009   Gx 15 53.5   +12  05 r  Ser          15.  p F,  vS,  stell
 6012   Gx 15 54.2   +14  35 s  Ser    2.3   13.  p F,  bet  2  B  st
 6010   Gx 15 54.4   +00  32 r  Ser          13.  p pF,  S,  E  90deg  +/-  , gbM,  r
I4586      15 54.9   +06  01 x  Ser                eF,  S,  R,  bet  *8  f  &  curve  of  st  p;  =  6014
I1164      15 55.1   +70  35 d  UMi                *13  with  neb?
 6068   Gx 15 55.4   +79  00 s  UMi    1.2   13.  p vF,  vS,  lE  0deg  , r
 6005   OC 15 55.8   -57  26 s  Nor    3.    10.7   Cl,  pS,  pRi,  mC,  st  16
 6014   Gx 15 55.8   +05  57 r  Ser          14.  p pB,  pL,  E;  =  IC  4586
 6016   Gx 15 55.9   +26  59 r  CrB          15.  p vF,  S,  E
I1152   Gx 15 56.7   +48  05 m  Her    1.0   14.  p vF,  S,  R,  sp  of  2
I1153      15 56.8   +48  10 d  Her                pF,  pS,  R,  bM,  *  nf,  nf  of  2
I1148      15 56.9   +22  25 x  Ser                neb  *;  =  6020
 6017   Gx 15 57.2   +06  00 r  Ser          14.  p !,  vF,  vS,  R,  disc  g,  smbM
 6020   Gx 15 57.2   +22  24 s  Ser    1.7   12.6   eF,  eS,  iR,  lbM;  =  IC  1148?
 6018   Gx 15 57.5   +15  51 s  Ser    1.8   15.  p vF,  S,  lE,  p  of  2
 6021   Gx 15 57.5   +15  56 s  Ser    2.1   14.  p eF,  vS,  lE,  f  of  2
 6048   Gx 15 57.6   +70  42 s  UMi    2.5   14.  p F,  R,  bM
 6022   Gx 15 57.8   +16  16 s  Ser    0.8   15.  p eF,  eS
 6023   Gx 15 57.8   +16  18 s  Ser    1.4   15.  p F,  S,  R,  bM
I1149      15 58.0   +12  05 d  Ser                eeF,  pS,  R,  am  4  st,  v  diffic
I1150      15 58.3   +15  52 d  Ser                2  S  st  in  F  neby
I1151   Gx 15 58.5   +17  27 x  Ser          13.  p vF,  pL,  dif
 6027   Gx 15 59.2   +20  45 s  Ser    2.2   12.4   eF,  vF*  inv,  2  vF  st  nr
I1187   Gx 15 59.3   +70  34 m  UMi    0.3   16.  p *13  with  neb
I4587   Gx 15 59.9   +25  57 z  CrB          15.  p eF,  eS,  T  CBr  sp
I4584   Gx 16 00.2   -66  23 c  TrA    1.7           eF,  S,  iF
I4585   Gx 16 00.3   -66  19 c  TrA    2.0           eF,  S,  iF
I1155   Gx 16 00.6   +15  42 v  Ser    1.3           vF,  S,  diffic
I1156   Gx 16 00.6   +19  44 x  Her          15.  p eeF,  pS,  lE,  2  st  nr
I1157   Gx 16 01.0   +15  31 m  Ser    0.6   16.  p vF,  vS
I1159      16 01.0   +15  25 d  Ser                vF,  eS,  R
 6071   Gx 16 01.1   +70  37 r  UMi          15.  p eF,  vS
I1160      16 01.1   +15  29 d  Ser                vF,  vS,  R
I1161   Gx 16 01.3   +15  39 m  Her    0.6   15.  p F,  vS,  R,  vSN
I1162   Gx 16 01.3   +17  41 x  Her          15.  p vF,  vS,  R,  diffic  (another  susp)
 6026   Pl 16 01.4   -34  32 s  Lup    0.8           F,  S,  R,  gpmbM,  triangle  of  st  np
 6028   Gx 16 01.4   +19  21 s  Her    1.7   13.2   vF,  pS,  no  Nucl
I1158   Gx 16 01.5   +01  43 s  Ser    2.9   13.  p eeF,  pL,  iR
I1163   Gx 16 01.5   +15  30 m  Ser    0.2   15.  p F,  R,  vSN
 6030   Gx 16 01.8   +17  58 r  Her          14.  p pF,  vS,  R,  bM
 6029   Gx 16 02.0   +12  34 r  Ser          15.  p vF,  vS
I1165      16 02.1   +15  42 d  Her                vF,  S,  diffic
I1166   Gx 16 02.1   +26  20 z  CrB          15.  p vF,  vS,  vF,  *  nf
 6038   Gx 16 02.6   +37  21 r  CrB          14.  p vF,  S,  R,  *10  sf
 6032   Gx 16 03.0   +20  58 s  Her    1.8   15.  p vF,  pL,  lE,  vlbM,  np  of  2
 6034   Gx 16 03.4   +17  12 r  Her          15.  p eeF,  vS,  R,  v  diffic
 6035   Gx 16 03.4   +20  54 s  Her    1.2   14.  p vF,  pL,  lE,  sf  of  2
 6025   OC 16 03.7   -60  30 s  TrA   12.     5.1   Cl,  B,  vL,  pRi,  lC,  st  7...
I1167   Gx 16 03.9   +14  57 m  Ser    0.5           F,  vS,  R
I1168   Gx 16 04.0   +14  54 m  Ser    0.5   16.  p pF,  vS,  iF,  D?,  3  F  st  n

I1169   Gx 16 04.2   +13  45 u  Ser    1.0   14.  p eF,  vS,  stellar
 6033   Gx 16 04.4   -02  08 r  Ser          15.  p vF  neb*
 6036   Gx 16 04.4   +03  52 r  Ser          14.  p vF,  vS,  R,  stell
 6037   Gx 16 04.4   +03  48 r  Ser          15.  p vF,  S
 6039    * 16 04.4   +17  42 A  Her                eeF,  vS,  R,  sp  of  3  in  line
 6040   Gx 16 04.4   +17  45 s  Her    1.6   15.  p vF,  eS,  F*  close
 6058   Pl 16 04.4   +40  41 s  Her    0.4   13.  p pF,  vS,  R,  stellar
 6079      16 04.5   +69  38 D  Dra                vF,  vS
I1170   Gx 16 04.5   +17  43 x  Her    0.3           vF,  vS,  vSFN,  6041  f
I1200   Gx 16 04.5   +69  42 u  UMi    1.4   14.  p pF,  pS,  lE,  *12  nr;  =  IC  1204?
 6041   Gx 16 04.6   +17  43 s  Her    1.6   13.7   F,  S
 6042   Gx 16 04.6   +17  42 r  Her          15.  p vF,  vS
 6043   Gx 16 04.9   +17  47 r  Her          15.  p eeF,  pS,  lE,  ``4th  of  10''
 6046    - 16 04.9   +19  21 r  Her                eF,  pL,  partly  verified
 6051   Gx 16 04.9   +23  56 s  Ser    1.9   13.0   F,  S,  R,  gbMN,  *10  sf;  =  IC  4588
I1171    * 16 04.9   +17  59 x  Her                neb  *?
I1172   Gx 16 04.9   +17  52 x  Her          15.  p vF,  S,  stellar  N
I4588   Gx 16 04.9   +23  56 u  Ser    2.1   15.  p vF,  vS,  R,  stell,  5051  p
 6044   Gx 16 05.0   +17  52 v  Her    0.5   16.  p eeF,  vS,  R,  vF*  close  p
 6045   Gx 16 05.1   +17  45 v  Her    1.3   14.2   eeF,  vS,  R,  v  diffic
 6047   Gx 16 05.1   +17  43 s  Her    1.3   13.6   eF,  R,  pS,  F*  close  n
 6052   Gx 16 05.2   +20  32 s  Her    1.0   13.0   F,  pL,  iR;  =  6064?
I1173   Gx 16 05.2   +17  25 v  Her    1.3           pF,  S,  iF,  gbM,  r
I1175    ? 16 05.3   +18  08 x  Her                neb  object,  6055  f  2'
I1177   Gx 16 05.3   +18  19 x  Her                vF,  *9.5  4'  s
 6050   Gx 16 05.4   +17  46 s  Her          15.  p eeF,  S,  R,  v  diffic
 6053    * 16 05.4   +18  08 A  Her                eeF,  S,  R,  v  diffic;  =  IC  1180
 6054   Gx 16 05.4   +17  47 r  Her          15.  p eeF,  pS,  lE,  F*  sp;  =  IC  1179
I1174   Gx 16 05.4   +15  02 u  Ser    1.0   14.  p pF,  S,  bMN  =  12m
I1176   Gx 16 05.4   +17  58 x  Her          15.  p eeF,  pS,  iR,  2  st  nr  s
I1179   Gx 16 05.4   +17  45 x  Her    0.6   16.  p eeF,  pS,  R;  =  6054?
I1180    ? 16 05.4   +18  07 x  Her                F*  with  neb?,  6055  f
 6055   Gx 16 05.5   +18  10 s  Her    1.5   15.  p eeF,  pS,  R,  v  diffic
 6056   Gx 16 05.5   +17  58 s  Her          15.  p eeF,  v  diffic
I1178   Gx 16 05.5   +17  36 v  Her    1.4           eeF,  pS,  bet  2  st
 6057   Gx 16 05.6   +18  10 r  Her          15.  p eeF,  eS,  R
I1181   Gx 16 05.6   +17  35 v  Her    1.1           eeF,  S,  R,  ``12th  of  12''
I1182   Gx 16 05.6   +17  48 v  Her    0.6   16.  p vF,  S,  dif,  lbM
I1183   Gx 16 05.6   +17  46 v  Her    0.9   14.3   vF,  vS,  stellar,  *11  sp  1'
 6049    - 16 05.7   +08  06 r  Ser                *7  in  photosphere
I1184   Gx 16 05.7   +17  47 x  Her    0.1   16.  p *13  with  neb?
I1185   Gx 16 05.7   +17  43 s  Her    0.8   13.9   *13  with  S  neb
I1186   Gx 16 05.7   +17  22 v  Her    0.8           F,  S,  dif
I1201   Gx 16 05.8   +69  37 u  Dra    1.1   16.  p eeF,  pS,  iR,  v  diffic
 6060   Gx 16 05.9   +21  30 s  Her    2.2   14.  p eF,  E,  sbM
I1188   Gx 16 06.1   +17  27 x  Her    0.5           vF,  S,  dif
I1189   Gx 16 06.2   +18  11 v  Her    0.6           eeF,  pS,  iR,  bet  2  st
 6061   Gx 16 06.3   +18  15 s  Her    1.4   15.  p eeF,  S,  R,  4  B  st  s
 6062   Gx 16 06.3   +19  47 r  Her          14.  p eF,  R,  vlbM,  r
I1190    ? 16 06.3   +18  14 x  Her                eeF,  S,  R,  6061  nr
I1191   Gx 16 06.5   +18  16 x  Her    0.5           eeF,  S,  lE
I1193   Gx 16 06.5   +17  43 x  Her    0.4           F,  S,  r
 6094   Gx 16 06.6   +72  30 r  UMi          14.  p vF,  vS,  lE
I1192   Gx 16 06.6   +17  46 x  Her    0.7           vF,  S,  iF,  dif
I1194   Gx 16 06.7   +17  46 v  Her    0.5   14.3   eF,  vS,  dif
I1195   Gx 16 06.7   +17  12 v  Her    0.6           vF,  S,  dif
 6064    - 16 07.0   +20  33 r  Her                vF,  vS,  r,  pB*  sf;  =  6052?
I1204      16 07.1   +69  56 D  UMi                vF,  S,  stell  N,  *11  f  3'
 6063   Gx 16 07.2   +07  58 r  Ser          14.  p F,  pL,  R,  vlbM
 6059      16 07.4   -06  25 D  Oph                vF,  S,  R
I4589    * 16 07.4   -06  23 F  Oph                *13,  in  eF  neb?
 6065   Gx 16 07.5   +13  52 r  Ser          15.  p eeF,  vS,  R,  sp  of  2
 6031   OC 16 07.6   -54  04 s  Nor    2.     8.5  Cl,  S,  mC,  st  11...14
 6066   Gx 16 07.7   +13  56 r  Ser          15.  p eeF,  vS,  R,  2  pB  st  nr,  nf  of  2
 6069   Gx 16 07.7   +38  55 r  CrB          15.  p vF*  in  vF,  vS,  R  neb
 6091   Gx 16 07.8   +69  55 r  UMi          14.  p vF,  vS,  R,  *  n
I1196   Gx 16 08.0   +10  47 u  Ser    1.1   15.  p eeF,  nr  p  *  of  3  in  line
I1197   Gx 16 08.3   +07  32 u  Ser    2.8   15.  p L,  mE,  *  att  nf
I4590   Gx 16 08.3   +28  29 m  CrB    0.3   16.  p F,  S,  gbM,  dif
I1198   Gx 16 08.6   +12  20 m  Ser    0.6   15.  p F,  vS,  R,  N  =  13m
 6070   Gx 16 10.0   +00  43 s  Ser    3.6   11.7   F,  L,  pmE,  vgbM,  r
 6073   Gx 16 10.1   +16  42 r  Her          14.  p vF,  S,  r
I1199   Gx 16 10.6   +10  02 u  Ser    1.3   15.  p eeF,  S,  E,  *9.5  f  9s
 6088   Gx 16 10.7   +57  28 r  Dra          14.  p vF,  vS,  lE
 6076   Gx 16 11.1   +26  52 r  CrB          15.  p vF,  S,  E
 6077   Gx 16 11.1   +26  56 r  CrB          15.  p F,  sbM
 6095   Gx 16 11.1   +61  16 r  Dra          14.  p eF,  pS,  R,  in  line  with  2  st
I4594      16 11.3   +23  40 d  Her                F,  S,  R,  N,  r
 6074   Gx 16 11.4   +14  15 r  Her          15.  p eF,  vS,  R,  bM
 6075   Gx 16 11.4   +23  57 r  Her          15.  p F,  vS,  R,  *  or  st  inv;  rr?
 6090   Gx 16 11.7   +52  27 s  Dra    1.9   14.  p vF,  S,  R
I4593   Pl 16 11.7   +12  04 x  Her    2.0   11.  p PN  , stellar
I4592   Nb 16 12.0   -19  28 s  Sco  150.           vL,  E,  inv  nu2  Sco
 6078   Gx 16 12.1   +14  12 r  Her          14.  p eF,  vS,  R,  bM
I4591      16 12.3   -27  56 d  Sco                *5.6  in  F  neb
 6085   Gx 16 12.5   +29  22 r  CrB          14.  p F,  S
 6086   Gx 16 12.6   +29  29 s  CrB    2.0   15.  p F,  vS,  stellar  N
 6089   Gx 16 12.7   +33  02 r  CrB          15.  p vF,  S,  R,  bM
 6092   Gx 16 12.7   +27  58 r  CrB          15.  p vF,  stellar  N
 6072   Pl 16 13.0   -36  14 s  Sco    1.2   14.  p pF,  R,  vgvlbM,  r
 6081   Gx 16 13.0   +09  52 r  Her          14.  p vF,  S,  R,  bM;  =  IC  1202
I1202   Gx 16 13.0   +09  52 u  Her    1.7   14.  p eF,  pS,  R
 6080   Gx 16 13.1   +02  10 r  Ser          14.  p pB,  pS,  R,  mbM,  with  *12.5  20"  nf  (nebs?)
 6067   OC 16 13.2   -54  13 s  Nor   13.     5.6  Cl,  vB,  vL,  vRi,  lC,  st  10...
 6083   Gx 16 13.3   +14  10 r  Her          15.  p eF,  vS,  diffic
 6084   Gx 16 14.2   +17  45 r  Her          15.  p eeF,  pS,  R,  v  diffic
 6097   Gx 16 14.3   +35  06 r  CrB          15.  p neb  *13
I1205   Gx 16 14.3   +09  31 m  Her    0.6   15.  p F,  S,  lE,  *  p
I1210   Gx 16 14.5   +62  33 u  Dra    1.6   14.  p vF,  vS,  lE,  r
 6096   Gx 16 14.7   +26  34 r  CrB          15.  p vF,  vS,  R,  bM
I1203      16 15.3   -22  20 d  Sco                no  descr
I1206   Gx 16 15.3   +11  18 u  Her    1.1   15.  p eF,  S,  R
 6111      16 15.5   +62  44 D  Dra                vF,  pS,  lE,  D*  nr  s
I1212   Gx 16 15.5   +64  14 z  Dra          15.  p eeF,  pS,  R,  3  st  n  in  line
 6082    - 16 15.6   -34  15 r  Sco                eF,  S,  E,  lbM;  nonexistent?
 6098   Gx 16 15.6   +19  27 r  Her          14.  p eF,  vS,  R,  *8  f  41s  , np  of  2
 6099   Gx 16 15.6   +19  27 r  Her          14.  p eF,  vS,  R,  sf  of  2
 6102   Gx 16 15.6   +28  09 r  CrB          15.  p vF,  S,  R
I1215   Gx 16 15.6   +68  25 u  Dra    1.3   14.  p vF,  S,  R,  1st  of  3
 6103   Gx 16 15.7   +31  57 r  CrB          14.  p vF,  S,  R,  vglbM
I1208   Gx 16 15.7   +36  32 z  CrB          15.  p vF,  *7  105"  n
I1216   Gx 16 16.0   +68  22 u  Dra    1.1   15.  p eeF,  pS,  R,  2nd  of  3
I1217      16 16.1   +69  41 d  Dra                eeF,  S,  R,  v  diffic
I4596   Gx 16 16.1   -22  38 c  Sco    1.9           F,  S,  mE  40deg  , mbMN,  prob  spir
I1214   Gx 16 16.2   +65  58 u  Dra    1.1   15.  p eF,  S,  R
 6104   Gx 16 16.5   +35  42 r  CrB          14.  p vF,  S,  iR
I1211   Gx 16 16.8   +53  01 u  Dra    1.2   14.  p pB,  vS,  R,  bM
I1218   Gx 16 16.8   +68  13 m  Dra    0.9   15.  p vF,  vS,  lE
 6093   Gb 16 17.0   -22  59 s  Sco    8.9    7.2   !!  glob.  cl.  ,  v8,  L,  vmbM  (var*),  rrr,  st
    14;  = M
 6100   Gx 16 17.0   +00  48 r  Ser          14.  p eeF,  vS,  eeF*  close  p
 6105   Gx 16 17.0   +34  52 r  CrB          15.  p F,  S,  R,  gvlbM
 6107   Gx 16 17.2   +34  53 r  CrB          14.  p F,  vS
 6123   Gx 16 17.2   +61  56 r  Dra          14.  p pF,  vS,  E,  *  nr
 6108   Gx 16 17.3   +35  07 r  CrB          15.  p eF,  vS,  R,  lbM
 6110   Gx 16 17.6   +35  05 r  CrB          15.  p eF,  vS,  R,  gbM
 6109   Gx 16 17.7   +35  00 s  CrB    1.3   15.  p F,  S,  R,  gbM
I4597      16 17.8   -34  22 d  Sco                bM,  mag  14
 6112   Gx 16 17.9   +35  06 r  CrB          15.  p vF,  vS,  R,  bM
I4598      16 18.2   -31  27 d  Sco                neb  streak  of  F  st,  1'  ns
 6114   Gx 16 18.3   +35  10 r  CrB          15.  p eF,  S,  R,  glbM
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I4600 16 18.3 -22 47 d Sco eF, eS, R
I1209 Nb 16 18.7 +15 34 x Her 0.3 pF, vS, R, bM, r
6106 Gx 16 18.8 +07 25 s Her 2.6 12.2 F, pL, lE, vgbM, r
6116 Gx 16 18.8 +35 09 r CrB 15. p vF, vS, R, gbM
6087 OC 16 18.9 -57 54 s Nor 12. 5.4 Cl, B, L, lC, st 7...10
6125 - 16 18.9 +57 36 r Dra pF, pS, lE; = 6130?
6135 - 16 19.0 +64 54 r Dra vF, vS, mE, 2 st nr
6128 Gx 16 19.1 +57 59 u Dra 1.4 13. p pF, pS, R, bM
6113 Gx 16 19.2 +14 07 r Her 15. p vF, S, R
6127 Gx 16 19.2 +57 58 r Dra 13. p pF, vS, R
6117 Gx 16 19.3 +37 05 r CrB 14. p vF, S, R
I4599 16 19.3 -42 16 d Sco PN , 15 mag
I1207 16 19.4 -29 39 d Sco no descr
6130 Gx 16 19.5 +57 37 r Dra 14. p pF, pL, R, B* nr p
6119 Gx 16 19.7 +37 48 r CrB 15. p vF, eS, R
6120 Gx 16 19.8 +37 47 s CrB 0.6 14. p vF, vS, R, D* nf
I4601 Nb 16 20.0 -20 02 s Sco 20. 2 st 8 in eL, dif neb, lE npsf
6133 - 16 20.1 +56 40 r Dra eeF, S, cE, v diffic
6122 Gx 16 20.2 +37 48 r CrB 15. p vF, R, no N
I4595 Gx 16 20.7 -70 09 c TrA 2.5 F, S, eE 55deg
6136 Gx 16 20.8 +55 57 r Dra 15. p eeF, S, R, v diffic
6140 Gx 16 20.9 +65 23 s Dra 6.2 12. p cF, pL, iR
6126 Gx 16 21.4 +36 23 r CrB 14. p F, vS, R, bMSN
6143 Gx 16 21.7 +55 05 s Dra 1.2 14. p pB, iR, vgvlbM
6118 Gx 16 21.8 -02 17 s Ser 4.7 12. p vF, cL, cE 45deg +/- , r
6129 Gx 16 21.8 +37 59 r CrB 14. p eF, vS, R, lbM
6131 Gx 16 22.0 +38 56 r CrB 14. p vF, pL, iR, dif
I1213 16 22.0 -01 31 d Ser F, vS, R
6138 ? 16 22.9 +40 56 A Her vF, vS, R, bM
6137 Gx 16 23.1 +37 55 s CrB 2.2 14. p F, S, iR, bM
6141 ? 16 23.1 +40 48 A Her vF, pS, no Nucl
6142 Gx 16 23.4 +37 16 r CrB 15. p eF, S, bM
I4602 16 23.4 +12 45 d Her eeF, lE, e diffic, F* f
6121 Gb 16 23.6 -26 32 s Sco 26.3 5.9 Cl, 8 or 10 B st line, with 5 st, rrr; = M4
6132 Gx 16 23.7 +11 48 r Her 15. p eF, vS, vlbM
I1219 Gx 16 24.4 +19 28 u Her 1.4 15. p F, S, E pF, lbM
6115 OC 16 24.6 -51 58 o Nor 3. 11. p Cl, eL, eRi
6145 Gx 16 25.0 +40 56 r Her 15. p F, R, bM
6147 Gx 16 25.1 +40 55 A Her 16. p eF, one of 3
6146 Gx 16 25.2 +40 53 r Her 14. p cF, vS, R, bM
6124 OC 16 25.6 -40 40 s Sco 29. 5.8 Cl, B, L, pRi, lCM, st 9...11
6154 Gx 16 25.6 +49 50 s Her 2.4 14. p vF, S, R, lbM, er
I4603 Nb 16 25.6 -24 28 s Oph 20. eF, vL, dif, st inv
I4604 Nb 16 25.6 -23 26 s Oph 60. rho Oph in eL neb
6157 Gx 16 25.7 +55 22 r Dra 15. p eeF, pS, R, v diffic
6101 Gb 16 25.8 -72 12 s Aps 10.7 9.3 glob. cl. , pF, L, iR, vgbM, rr, st 14
6150 Gx 16 25.8 +40 30 r Her 15. p vF, vS, R
6155 Gx 16 26.1 +48 22 r Her 13. p F, pS, iF, gbM
6170 - 16 27.0 +59 35 r Dra eeF, vS, R, v diffic; = 6176?
6148 Gx 16 27.1 +24 05 r Her vF, S, with st
6144 Gb 16 27.3 -26 02 s Sco 9.3 9.1 Cl, cL, mC, gbM, rrr
6149 Gx 16 27.4 +19 36 r Her 15. p vF, pS, R, pB* nr s
6159 Gx 16 27.4 +42 41 r Her 15. p vF, S, iR, lbM
6176 Gx 16 27.5 +59 35 r Dra 15. p eF, eS, v diffic
6134 OC 16 27.7 -49 09 s Nor 7. 7.2 Cl, cL, pRi, lCM, st 13...15
6139 Gb 16 27.7 -38 51 s Sco 5.5 9.2 B, pL, R, psbM, rr
6158 Gx 16 27.7 +39 23 s Her 16. p F, S, iF
6160 Gx 16 27.7 +40 55 s Her 2.1 15. p cF, pL, R, gbM, r
6161 Gx 16 28.3 +32 49 r Her 15. p vF, S, lbM
6162 Gx 16 28.4 +32 52 r Her 15. p F, S, lbM
6163 Gx 16 28.4 +32 52 r Her 15. p vF, S, lbM
6166 Gx 16 28.6 +39 33 s Her 2.4 12.0 pF, S, vlE, vgmbM
I1220 16 29.2 +08 27 d Her eeF, pS, E
6182 Gx 16 29.5 +55 31 r Dra 14. p vF, vS, iR
6174 Gx 16 29.7 +40 51 r Her 15. p vF
6173 Gx 16 29.8 +40 49 s Her 2.2 14. p cF, vS, R, bM
6175 Gx 16 29.9 +40 39 r Her 15. p vF, vS, R
I4605 Nb 16 30.2 -25 06 s Sco 30. *7 in eF, vL neb
I4607 16 30.3 +24 34 d Her F, cS, dif
6180 Gx 16 30.5 +40 34 r Her 15. p eF, vS, R, mbM
6177 Gx 16 30.6 +35 04 r Her 15. p vF, pL, iE, rr, * nr
6179 Gx 16 30.7 +35 07 r Her 15. p vF, S, bMN, 4' nf 6177
6168 Gx 16 31.4 +20 12 r Her 14. p eeF, mE, F* at p end, v diffic
6153 Pl 16 31.5 -40 15 s Sco 0.4 12. p PN , stellar
6184 Gx 16 31.5 +40 35 r Her 15. p eF, vS, R, vlbM
6187 Gx 16 31.6 +57 43 r Dra 15. p vF, vS, lbM
6189 Gx 16 31.6 +59 39 r Dra 13. p vF, pS, lE
I4606 16 31.6 -26 03 d Sco neb; F* p 4s .5, 0'.5 n
6190 Gx 16 32.0 +58 27 r Dra 13. p vF, pS, R, F* nr
6191 - 16 32.0 +58 48 r Dra pF, pL, E, 2 st p
6172 - 16 32.1 -01 29 r Oph vF, eS, R, bM
6181 Gx 16 32.3 +19 50 s Her 2.6 11.9 pB, pL, vlE, pgmbM
6171 Gb 16 32.5 -13 03 s Oph 10.0 8.1 glob. cl. , L, vRi, vmC, R, rrr; = M107
6252 Gx 16 32.5 +82 36 r UMi 15. p vF, vS, f of 2
6217 Gx 16 32.6 +78 12 s UMi 3.1 11.2 B, cL, lE, slbM
6251 Gx 16 32.6 +82 33 r UMi 14. p cF, S, bM, p of 2
6152 OC 16 32.7 -52 37 s Nor 30. 8. p Cl, L, lC, st L
I4609 Gx 16 33.0 +22 46 m Her 0.7 15. p F, vS, R, gbMN
6185 Gx 16 33.2 +35 20 r Her 14. p F, S, R, gbM, *11 np
I4610 16 33.6 +39 16 d Her F, eS, R, gbM
I4611 16 33.7 +39 20 d Her F, vS, iF
I4612 16 33.8 +39 16 d Her F, eS, R, gbM
6164 Pl 16 34.0 -48 06 r Nor eF (strongly susp), D* f nr
6165 Pl 16 34.0 -48 06 r Nor F, cS, lE, vglbM, D* p
6169 OC 16 34.1 -44 03 s Nor 7. 7. p Cl, mu Nor inv
6167 OC 16 34.4 -49 36 s Nor 8. 6.7 Cl, L, lC, iF
6186 Gx 16 34.4 +21 33 s Her 1.8 14. p eF, vS, E
I1221 Gx 16 34.7 +46 24 u Her 1.3 15. p eeF, pS, E, p of 2
6156 Gx 16 34.8 -60 36 r TrA pF, pL, vlE, gbM
I1222 Gx 16 35.1 +46 13 v Her 1.9 eeF, pL, R, f of 2
I1223 16 35.4 +49 16 d Her eeF, pS, R, bet 2 dist F st
6198 Gx 16 35.5 +57 31 r Dra 15. p vF, vS, R, 2 st f
6178 OC 16 35.7 -45 38 s Sco 4. 7.2 Cl, B, S, st pL
6202 - 16 36.2 +61 57 r Dra eeF, pS, * f
6195 Gx 16 36.5 +39 02 s Her 1.8 15. p vF, S, R, gbM, bet 2 st
6194 Gx 16 36.6 +36 11 r Her 14. p vF, vS, sbM *12
I1225 Gx 16 36.9 +67 38 u Dra 1.5 15. p eeF, vS, 2 or 3 F st inv, * p
I4613 Gx 16 37.3 +35 59 x Her eF, dif; = 6196?
6196 Gx 16 37.4 +36 06 A Her 14. p vF, vS, stellar
6197 Gx 16 37.5 +36 02 A Her 15. p eF, E, stellar
I4614 Gx 16 37.8 +36 07 x Her eF, stellar
I4615 Gx 16 37.9 +36 04 s Her 1.7 12.8 *13 in S neb
I4616 Gx 16 38.0 +36 00 x Her eF, S, dif, r; *12 sf 2'
6151 16 38.3 -73 15 r Aps vF, vS *9 nr
6199 * 16 39.0 +36 06 A Her eF
6214 Gx 16 39.5 +66 01 r Dra 14. p eF, vS, R
6206 Gx 16 40.1 +58 38 r Dra 14. p pF, eS, R, stell, 3 vF st nr; = IC 1227
I1227 ? 16 40.1 +58 37 x Dra vF, S, R, stellar N; = 6206
6201 Gx 16 40.2 +23 45 r Her 15. p eF, vS
6192 OC 16 40.3 -43 22 s Sco 8. 9. p Cl, pL, pRi, iR, st 11...14
6203 Gx 16 40.4 +23 46 r Her 15. p eF, vS
6188 Nb 16 40.5 -48 47 s Ara 20. ! F, vL, viE, B* inv
I1226 Gx 16 41.1 +46 00 z Her 15. p eF, S, R, forms arc with 4 st
6193 OC 16 41.3 -48 46 s Ara 15. 5.2 Cl, vL, lRi, lC, rrr, F neb inv
6211 Gx 16 41.5 +57 47 s Dra 2.0 14. p vF, pS, R, sp of 2
6213 Gx 16 41.5 +57 50 r Dra 15. p eF, vS, R, nf of 2
6183 Gx 16 41.6 -69 23 r TrA vF, eS, R, gbM
6205 Gb 16 41.7 +36 28 s Her 16.6 5.9 !! glob. cl. , eB, vRi, vgeCM, st 11...; = M13
I1228 Gx 16 42.0 +65 34 u Dra 1.6 14. p vF, pS* n, 4 st in curve s
I4617 Gx 16 42.1 +36 41 x Her S, E 29deg , bM

I1224 Gx 16 42.9 +19 15 m Her 0.7 15. p vF, vS, R, stellar
6207 Gx 16 43.1 +36 50 s Her 3.0 11.6 pB, pL, E 45deg +/- , vgmbM
6223 Gx 16 43.1 +61 34 s Dra 3.4 13. p F, S, R, mbM
6212 Gx 16 43.3 +39 48 r Her 15. p eF
6232 Gx 16 43.3 +70 38 r Dra 13. p pF, pL, lE
6226 Gx 16 43.5 +61 58 r Dra 14. p F, S, triangle with 2 st 12 & 14
6200 OC 16 44.2 -47 29 s Ara 12. 7.4 Cl (in Milky Way)
I4619 Gx 16 44.2 +17 46 z Her 15. p F, R
6210 Pl 16 44.5 +23 49 s Her 0.2 9. p PN , vB, vS, R, disc & border (Nucl variable?)
6236 Gx 16 44.5 +70 48 s Dra 3.0 12. p F, pL
I1229 Gx 16 45.0 +51 17 u Dra 1.0 15. p eeF, pS, v diffic, np of 2
I1230 16 45.3 +51 13 d Her eeF, L, R, v diffic, sf of 2
6245 Gx 16 45.5 +70 48 r Dra vF, pL, R
6219 Gx 16 46.3 +09 02 r Her 15. p F, S
6248 Gx 16 46.4 +70 22 s Dra 3.3 13. p eeF, pL, R, v diffic
6204 OC 16 46.5 -47 01 s Ara 5. 8.2 Cl, pRi, eiCM, st 11...12
6237 Gx 16 46.5 +70 23 r Dra eF, S, E
I1231 Gx 16 46.9 +58 27 u Dra 2.4 14. p eeF, L, R, pB* sp
I4608 Gx 16 46.9 -77 29 c Aps 1.2 vF, vS, cE 85deg , bM
6229 Gb 16 47.0 +47 32 s Her 4.5 9.4 glob. cl. , vB, L, R, disc & F border, r
6218 Gb 16 47.2 -01 57 s Oph 14.5 6.6 !! glob. cl. , vB, vL, iR, gmbM, rrr, st 10...; =
6220 Gx 16 47.2 -00 17 r Oph 15. p eeF, pS, iR, 3 F st s
6238 Gx 16 47.2 +62 08 r Dra 14. p eeF, eS, eF* close, v diffic
6228 Gx 16 48.0 +26 12 r Her 15. p vF, S
6244 Gx 16 48.1 +62 11 r Dra 14. p vF, vS, R, bet 2 st, nf of 2
6224 Gx 16 48.2 +06 18 r Her 15. p eeF, vS, lE, pB* nr n, n of 2
6247 Gx 16 48.2 +62 58 r Dra 13. p F, pS, iF
6225 Gx 16 48.3 +06 13 r Her 15. p eF, vS, lE, F st inv, s of 2
I1233 16 48.4 +63 09 d Dra eF, vS, vE, bet 2 st (= 6247?)
I4620 16 48.5 +18 17 d Her vF, R
I1232 16 49.1 +46 05 d Her eeF, S, iR, B* sf
6216 OC 16 49.4 -44 44 s Sco 4. 10. p Cl, pS, pRi, pC, st 12...15
6208 OC 16 49.5 -53 49 s Ara 16. 7.2 Cl, L, Ri, lCM, st 9...12
6246 Gx 16 49.9 +55 33 s Dra 1.7 14.1 eF, S, R
6233 Gx 16 50.1 +23 34 r Her 15. p pF, S, R, gbM
6239 Gx 16 50.1 +42 44 s Her 2.8 12.3 vF, E, biN np sf
6241 Gx 16 50.1 +45 24 r Her 15. p eF, pS
6230 Gx 16 50.6 +04 35 r Her 15. p eeF, pS, R, v diffic
6222 OC 16 50.7 -44 45 r Sco 10. p Cl, vL, vRi, lbM, st 12...13
I4621 Gx 16 50.8 +08 48 u Her 1.1 15. p vF, vS
6215 Gx 16 51.1 -58 59 s Ara 2.0 12. p pF, R, vglbM, *4 p 79s
I4623 Gx 16 51.2 +22 31 m Her 0.6 15. p F, S, R, gbM
I4624 Gx 16 51.5 +17 27 z Her 16. p vF, R
6227 - 16 51.6 -41 13 r Sco Cl, eL, eRi (Milky Way)
6260 Gx 16 51.8 +63 43 r Dra 15. p eF, pS, R, sev st nr sf
6234 Gx 16 51.9 +04 23 r Oph 15. p F, S, R
I1235 Gx 16 52.1 +63 07 z Dra 15. p vF, dif, pS, *8 nf 3'
I4622 ? 16 52.1 -16 14 x Oph cF, S, iF, D
6258 Gx 16 52.3 +60 33 r Dra 14. p eF, vS, R, B* & D* p
6243 Gx 16 52.4 +23 21 r Her 15. p vF, vS, iF, dif
6221 Gx 16 52.8 -59 13 s Ara 3.2 11. p glob. cl. , pB, cL, R, glbM, rr
I1234 16 52.9 +56 54 d Dra vF, sev st in neb?
I4625 16 52.9 +02 26 x Oph neb, *10 close nf; = 6240?
6240 Gx 16 53.0 +02 24 s Oph 2.2 15. p vF, pL, lE, dif; = IC 4625
6235 Gb 16 53.4 -22 11 s Oph 5.0 10.2 pB, cL, iR, rrr, st 14...16
I4626 * 16 53.4 +02 19 F Oph eF
6262 - 16 53.6 +56 56 r Dra eeF, pS, R, v diffic
6231 C+N 16 54.0 -41 48 s Sco 15. 2.6 Cl, B, cL, pRi, st 10...13
I4627 16 54.1 -07 38 d Oph eF, eS, dif, *12 s 12"
6255 Gx 16 54.8 +36 30 s Her 3.5 14. p eF, cL, E 90deg
6209 Gx 16 55.1 -72 32 r Aps vF, pL, vgvlbM
I4630 Gx 16 55.1 +26 39 u Her 1.3 15. p F, S, R, stell N
6242 OC 16 55.6 -39 30 s Sco 9. 6.4 Cl, B, L, Ri, st 8...11
6275 Gx 16 55.6 +63 15 s Dra 15. p eeF, S, lE, v diffic
6257 Gx 16 56.0 +39 39 r Her 15. p vF (vS D*?), F D* nf
I4629 16 56.2 -16 43 d Oph vF, vS, eE 75deg , susp
I1237 Gx 16 56.3 +55 02 v Dra 2.1 eF, pL, lE, * nr p
6261 Gx 16 56.5 +28 00 r Her 15. p eF, eS, iF
6263 Gx 16 56.7 +27 50 r Her 15. p vF, vS, R
I4628 Nb 16 57.0 -40 20 s Sco 90. F, eL, E pf, dif
6254 Gb 16 57.1 -04 06 s Oph 15.1 6.6 ! glob. cl. , B, vL, R, gvmbM, rrr, st 10...15; =
6264 Gx 16 57.3 +27 52 r Her 15. p eF, vS
6265 Gx 16 57.5 +27 51 r Her 15. p eF, vS
6288 Gx 16 57.5 +68 27 r Dra 15. p eF, vS, R, sp of 2
6249 OC 16 57.6 -44 47 s Sco 6. 8.2 Cl, pRi, vlC, iF, st L & S
6289 Gx 16 57.8 +68 31 r Dra 15. p eF, pL, mE, nf of 2
I4618 Gx 16 57.9 -77 00 c Aps 1.9 !! eF, eS, 2-branch spiral
6250 OC 16 58.0 -45 48 s Ara 8. 5.9 Cl, L, lRi, lC, st 8...12
6269 Gx 16 58.0 +27 52 r Her 14. p F, S, R
6267 Gx 16 58.2 +22 59 r Her 14. p vF, pL, R, lbM
6285 Gx 16 58.4 +58 59 s Dra 1.3 15. p eeF, S, R, v diffic, np of 2
I1236 Gx 16 58.5 +20 02 v Her 1.2 eF, pS, vlE, vF* close p
I4632 16 58.5 +22 55 d Her eF; neb?
6286 Gx 16 58.6 +58 58 s Dra 1.5 14. p eF, pS, R
6270 Gx 16 58.7 +27 38 r Her 15. p eF, S, R
6271 Gx 16 58.8 +27 59 r Her 15. p vF, R
6272 Gx 16 58.9 +27 56 r Her 15. p vF
6279 Gx 16 59.0 +47 14 r Her 15. p vF, pS, lE, coarse D* np
I4636 16 59.0 +47 11 d Her vF, fainter than 6279
6253 OC 16 59.1 -52 43 s Ara 5. 10. p Cl, S, triangular, st 13
6274 Gx 16 59.4 +29 57 r Her 14. p eF, vS
6283 Gx 16 59.4 +49 56 r Her 13. p vF, cS, iR
6256 Gb 16 59.5 -37 07 s Sco glob. cl. , vF, vL, iR, vgbM, rrr
6276 Gx 17 00.3 +23 07 r Her eF
I1238 17 00.6 +23 05 d Her eF
6259 OC 17 00.7 -44 40 s Sco 10. 8.0 ! Cl, B, vL, vRi, st 11...
6277 Gx 17 00.8 +23 03 r Her 15. p eF
6282 Gx 17 00.8 +29 50 r Her 15. p vF, S, R
I1239 Gx 17 00.8 +23 01 u Her 2.1 14. p eF, eF stell N; = 6276?
6278 Gx 17 00.9 +23 01 r Her 14. p vF, stellar
6290 Gx 17 00.9 +59 00 r Dra 14. p eF, pS, R, * close f
6291 Gx 17 00.9 +58 58 r Dra 15. p eeF, eS, R
I1240 17 01.0 +61 03 d Dra susp neb, 3' nf *8.7
6266 Gb 17 01.2 -30 07 s Oph 14.1 6.6 ! glob. cl. , vB, L, gmbM, rrr, st 14...16; = M62
I4638 17 01.2 +33 34 d Her no descr, *9 sf 2'.5
I1241 Gx 17 01.4 +63 42 u Dra 1.7 14. p eF, pS, R
I4634 Pl 17 01.6 -21 50 s Oph 0.2 11. p PN , stellar
6280 Gx 17 01.9 +06 40 r Oph 15. p pB, S, lE
6268 OC 17 02.4 -39 44 s Sco 6. 10. p Cl, B, pL, cRi, st 10...
6273 Gb 17 02.6 -26 16 s Oph 13.5 7.2 glob. cl. , vB, L, R, vCM, rrr, st 16; = M19
I4639 17 02.9 +22 54 d Her vF, vS, R
6292 Gx 17 03.0 +61 03 r Dra 14. p eF, E, v diffic, F st nr
6295 Gx 17 03.1 +60 20 r Dra 15. p eF, S, mE, F* nr
6298 17 03.4 +62 02 d Dra vF, eS, R, bet 2 st, f of 2
6331 Gx 17 03.5 +78 38 r UMi 15. p eF, S
6297 Gx 17 03.6 +62 02 r Dra 14. p pB, pS, R, bet 2 st, p of 2
6284 Gb 17 04.5 -24 46 s Oph 5.6 9.0 glob. cl. , B, L, R, CM, rrr, st 16...
6281 C+N 17 04.8 -37 54 s Sco 60. 5.4 Cl, L, pRi, lC, st 9...11
6299 Gx 17 05.0 +62 27 r Dra 15. p vF, vS, R
6303 17 05.1 +68 21 D Dra eF, pL, mE, nearly bet 2 st
6287 Gb 17 05.2 -22 42 s Oph 5.1 9.2 glob. cl. , cB, L, R, gmpCM, rrr, st 16
I4637 Pl 17 05.2 -40 53 s Sco 0.3 14. p PN , stellar
6324 Gx 17 05.4 +75 25 r UMi 13. p vF, S, E, S* s
6306 Gx 17 07.6 +60 44 s Dra 1.2 14. p vF, vS, lE
6307 Gx 17 07.7 +60 45 s Dra 1.6 14. p vF, vS, lE, *13 nr n
6310 Gx 17 08.0 +61 00 s Dra 2.1 14. p F, pL, lE

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I4643     17 08.5   +42  20 x  Her                F, *12 inv;  = 6301
 6301  Gx 17 08.6   +42  20 r  Her          14. p F, stellar;  = IC 4643
 6296  Gx 17 08.7   +03  54 s  Oph    1.1   14. p pB
I1242  Gx 17 08.7   +04  02 u  Oph    1.0   15. p vS,  R,  vlbM
 6317  Gx 17 09.3   +62  53 r  Dra          16. p eeF,  S,  R,  F* nr,  sp  of  2
 6319  Gx 17 09.6   +62  59 r  Dra          14. p vF,  vS,  R,  lbM,  nf  of  2
I1251  Gx 17 10.1   +72  24 u  Dra    1.7   14. p eeF,  pS,  R,  sp  of  2,  6340  nr
 6293  Gb 17 10.2   -26  35 s  Oph    7.9    8.2  glob.  cl.  ,  vB,  L,  R,  psbM,  rrr,  st  16
 6294   - 17 10.3   -26  34 r  Oph                only  a  D* 13,  13.5,  dist  8"
 6313  Gx 17 10.4   +48  19 r  Her          15. p eeF,  vS,  lE,  bet  2  F  st
 6340  Gx 17 10.4   +72  18 s  Dra    3.4   11.0  cF,  pL,  R,  vgmbM
 6311  Gx 17 10.6   +41  39 r  Her          15. p pB,  vS,  R
I1243   ? 17 10.6   +10  47 x  Oph                only  5  st  12-14  in  line  ns,  45"  long
I1244  Gx 17 10.6   +36  17 u  Her    1.2   15. p vF,  pS,  R,  bet  2  st
 6312  Gx 17 10.8   +42  17 r  Her          15. p eF,  irrR,  dif,  vS*  inv
I4631     17 11.0   -77  36 d  Aps                eF,  eeS,  ann?,  susp
I1254  Gx 17 11.5   +72  24 v  Dra    1.9   13.9  eeF,  pS,  R,  nf  of  2,  v  diffic
I1248  Gx 17 11.8   +60  00 v  Dra    1.5         eeF,  pS,  R,  bet  2  st  p  &  f
I4642  Pl 17 11.8   -55  24 s  Ara    0.4   13. p PN , stellar
 6308  Gx 17 12.0   +23  23 s  Her    1.3   14. p vF,  S,  R,  sbM
 6314  Gx 17 12.6   +23  16 s  Her    1.8   13.1  F,  vS,  R,  bM
I1245  Gx 17 12.6   +38  02 u  Her    1.7   15. p eF,  S,  R,  bM,  F*  close  s
 6315  Gx 17 12.8   +23  13 s  Her    0.9   13.3  eF,  S
 6320  Gx 17 12.9   +40  16 r  Her          15. p eF,  *13  p  0s  .5
 6323  Gx 17 13.3   +43  46 r  Her          15. p eF,  vS,  diffic
 6302  Pl 17 13.7   -37  06 s  Sco    0.8   13. p pB,  E  pf,  PN
I4633  Gx 17 13.8   -77  32 c  Aps    3.7         vF,  cL,  cbM;  spir?
 6327  Gx 17 14.0   +43  38 r  Her          15. p eF,  vS,  diffic
 6309  Pl 17 14.1   -12  55 s  Oph    1.1   11. p close  Dneb,  160deg  ,  both  B,  eS
 6329  Gx 17 14.3   +43  41 r  Her          14. p vF,  vS,  R,  bM
I1246     17 14.3   +20  14 d  Her                neb  *13?  *10  n  1'
I1250     17 14.4   +57  25 d  Dra                pF,  S,  cE
 6304  Gb 17 14.5   -29  28 s  Oph    6.8    8.4  glob.  cl.  ,  B,  cL,  R,  lbM,  rrr,  st  16
 6321  Gx 17 14.5   +20  18 r  Her          14. p eF,  iR,  pS,  vlbM
I4645  Gx 17 14.6   +43  07 z  Her          16. p eF,  pS,  *13.5  f  80°
I1249  Gx 17 14.9   +35  31 z  Her          15. p eeF,  pS,  R,  v  diffic,  4  st  s
 6332  Gx 17 15.0   +43  39 r  Her          14. p vF,  oval,  ibM
 6338  Gx 17 15.3   +57  25 r  Dra          14. p F,  S,  R,  vglbM
 6345  Gx 17 15.3   +57  21 r  Dra          15. p eeF,  vS,  R,  2nd  of  3
 6346  Gx 17 15.3   +57  19 r  Dra          15. p eeF,  S,  R,  3rd  of  3
I4635  Gx 17 15.7   -77  29 c  Aps    3.1         vF,  eS,  cbM
 6330  Gx 17 15.8   +29  23 r  Her          15. p eF,  S,  R
I1252     17 15.8   +57  23 d  Dra                vF,  pS,  *12.5  v  close
I4649     17 15.8   +57  23 d  Dra                eF,  pS,  v  dif,  *12.5  f  0'.5
I4650     17 15.9   +57  20 d  Dra                eF,  st  and  neb
I4648  OC 17 16.0   +45  52 x  Her                Cl,  vS,  neb,  vF  D*  inv
 6336  Gx 17 16.3   +43  48 r  Her          14. p vF,  vS,  R,  bM
I1247   * 17 16.4   -12  47 F  Oph                stellar,  *9.8  sp  0'.7;  D*  12-12  is  30s   p
 6316  Gb 17 16.6   -28  08 s  Oph    4.9    9.0  glob.  cl.  ,  cB,  pS,  R,  gvmbM,  rrr,  st  16
 6300  Gx 17 17.0   -62  49 s  Ara    5.4   11. p F,  vL,  vlE,  am  st,  2  st  inv
 6339  Gx 17 17.1   +40  51 s  Her    3.4   13. p vF,  L,  iR,  sp  of  2
 6341  Gb 17 17.1   +43  08 s  Her   11.2    6.5  glob.  cl.  ,  vB,  vL,  eCM,  rrr,  st  S;  = M92
 6344  Gx 17 17.2   +42  27 r  Her                F,  S,  R,  *12  nf,  nr
 6343  Gx 17 17.3   +41  03 r  Her          14. p vF,  S,  lE,  nf  of  2
 6318  OC 17 17.8   -39  27 s  Sco    4.    12. p Cl,  pL,  Ri,  R,  gbM,  st  12...14
 6359  Gx 17 17.9   +61  47 s  Dra    1.2   12.6  pB,  S,  R,  bMN  =  *12
 6325  Gb 17 18.0   -23  46 s  Oph    4.3   10.7  pF,  L,  R,  rr
 6305  Gx 17 18.1   -59  09 t  Ara                vF,  vS,  R,  glbM
 6348  Gx 17 18.4   +41  39 r  Her          15. p eF,  vS,  iR,  lbM
 6322  OC 17 18.5   -42  57 s  Sco   10.     6.0  Cl,  vL,  pRi,  lC  (place  of  *  nf)
 6361  Gx 17 18.6   +60  37 s  Dra    2.4   14. p vF,  pS,  mE,  nearly  bet  2  st
 6350  Gx 17 18.7   +41  41 r  Her          14. p pF,  pS,  gbM
 6358  Gx 17 19.0   +52  37 r  Dra          15. p eF,  S,  R,  D*  nr  np
 6349  Gx 17 19.1   +36  03 r  Her          15. p vF,  eS,  R,  lbM,  p  of  2
 6333  Gb 17 19.2   -18  31 s  Oph    9.3    7.9  glob.  cl.  ,  B,  L,  R,  eCM,  rrr,  st  14;  = M9
 6351  Gx 17 19.2   +36  02 r  Her          16. p vF,  vS,  fainter  than  6349
I1253     17 19.8   +18  40 d  Her                F
 6347  Gx 17 19.9   +16  40 r  Her          14. p eF,  iR,  dif
 6334  Nb 17 20.5   -35  43 s  Sco   40.          cF,  vL,  icE,  vglbf,  *8  inv
 6335   - 17 20.5   -30  08 r  Sco                dif  neb  in  patches
 6326  Pl 17 20.8   -51  45 s  Ara    0.2   12. p !!! PN , pB,  vS,  R
 6342  Gb 17 21.2   -19  35 s  Oph    3.0    9.9  cB,  pS,  lE,  er
 6353   - 17 21.2   +15  42 r  Her                pB,  pS,  3  S  st  inv,  *10  nf  1'
I4660  Gx 17 21.6   +75  51 v  UMi    1.5         pL,  E  ns,  *9.2  sp  30°
 6337  Pl 17 22.3   -38  29 s  Sco    0.8         !!!  ring  ,  eF,  S,  am  st
 6363  Gx 17 22.7   +41  08 r  Her          14. p vF,  S,  R,  gbM
 6365  Gx 17 22.7   +62  11 r  Dra          14. p eeF,  pL,  iR,  eF  st  inv,  *  sf
I1255  Gx 17 23.1   +12  41 u  Oph    1.1   14. p vF,  pS,  R,  forms  trap  with  3  st
 6370  Gx 17 23.3   +57  00 r  Dra          14. p vF,  vS,  R,  B*  nr  n
I1261     17 23.5   +71  17 d  Dra                eeF,  pS,  R
 6356  Gb 17 23.6   -17  49 s  Oph    7.2    8.4  glob.  cl.  ,  vB,  cL,  vgvmbM,  rrr,  st  20
 6328  Gx 17 23.7   -64  59 A  Ara                eF  pair  of  st  only,  one  hazy
I1256  Gx 17 23.8   +26  28 u  Her    1.7   14. p F,  S,  gbM
I4640  Gx 17 23.9   -80  04 c  Aps    1.5         vF,  eS,  cbM
I4646  Gx 17 23.9   -60  00 c  Ara    2.6         F,  pL,  spir
 6355  Gb 17 24.0   -26  21 s  Oph    5.0    9.6  cF,  L,  R,  gbM,  rrr
I4641  Gx 17 24.2   -80  09 c  Aps    1.6         eF,  vS,  bM
 6373  Gx 17 24.3   +59  01 r  Dra          14. p eeF,  pL,  v  diffic
 6364  Gx 17 24.5   +29  24 r  Her          14. p pF,  vS,  R,  bM  *13
 6354 Ast 17 24.6   -38  32 r  Sco                eF,  S
 6357  Nb 17 24.6   -34  10 s  Sco   50.          F,  L,  E,  vglbM,  D*  inv
I4644  Gx 17 24.6   -73  56 c  Aps    2.1         eF,  vS,  mE  135deg
I4651  OC 17 24.7   -49  57 s  Ara   12.     6.9  Cl,  pC
 6367  Gx 17 25.2   +37  46 r  Her          15. p vF*  in  vF,  vS,  R  neb
 6360   - 17 25.4   -30  00 r  Oph                neb  in  patches  (Milky  Way)
 6376  Gx 17 25.4   +58  50 r  Dra          14. p eeF,  eS,  R,  v  diffic
 6377  Gx 17 25.4   +58  50 r  Dra          14. p eF,  eS,  R,  lbM
 6352  Gb 17 25.5   -48  25 s  Ara    7.1    8.2  Cl  (not  neb),  pF,  L
I4647  Gx 17 26.0   -80  12 c  Aps    1.7         bM
 6395  Gx 17 26.4   +71  06 s  Dra    2.6   13. p vF,  pL,  lE,  D*  n
I4652  Gx 17 26.4   -59  44 c  Ara    1.7         F,  PN  ,  15  mag
 6368  Gx 17 27.1   +11  33 s  Oph    4.0   13. p F,  S,  E
I1257     17 27.1   -07  06 d  Oph                F,  pL,  lbM
I4653  Gx 17 27.1   -60  53 c  Ara    1.6         eeF,  eS,  bM,  eF,  *  vnr,  susp
 6371  Gx 17 27.2   +26  30 r  Her          15. p vF,  S,  R,  np  of  2
 6381  Gx 17 27.3   +60  01 s  Dra    1.5   14. p vF,  pL,  E
I1258  Gx 17 27.3   +58  31 v  Dra    1.2         pB,  pS,  R,  1st  of  3
I1259  Gx 17 27.4   +58  33 v  Dra    1.5         pB,  pS,  R,  2nd  of  3
I1260     17 27.4   +58  29 d  Dra                eeF,  S,  R,  3rd  of  3
 6372  Gx 17 27.5   +26  28 s  Her    1.9   14. p vF,  pS,  iF,  sf  of  2
 6366  Gb 17 27.7   -05  05 s  Oph    8.3   10.0  F,  L,  vlbM
 6382  Gx 17 27.8   +56  52 r  Dra          15. p pF,  pS,  R
 6385  Gx 17 28.0   +57  33 r  Dra          14. p eF,  S,  R,  B*  s
 6387  Gx 17 28.4   +57  34 r  Dra          15. p eF,  S,  R
 6390  Gx 17 28.5   +60  06 r  Dra          14. p eeF,  mE,  v  diffic
 6386  Gx 17 28.9   +52  44 r  Dra          15. p vF,  pS,  R,  bet  2  st
 6391  Gx 17 28.9   +58  52 r  Dra          15. p eF,  vS,  R,  nearly  bet  2  st
 6369  Pl 17 29.3   -23  46 s  Oph    1.1   13. p !! ring  , pB,  S,  R
 6375  Gx 17 29.3   +16  12 r  Her          14. p F,  vS,  R
 6412  Gx 17 29.6   +75  42 s  Dra    2.3   11.8  glob.  cl.  ,  cL,  R,  vgbM,  rr
 6394  Gx 17 30.1   +59  32 r  Dra          16. p eF,  pS,  R,  n  of  2
 6393  Gx 17 30.3   +59  39 r  Dra          15. p eF,  pS,  R,  s  of  2
 6378  Gx 17 30.6   +06  17 r  Oph          15. p v  difficult
 6379  Gx 17 30.6   +16  17 s  Her    1.3   15. p vF,  pL
 6414  Gx 17 30.6   +74  23 r  Dra          15. p eeF,  pS,  R,  v  diffic,  bet  2  st
 6399  Gx 17 31.8   +59  38 r  Dra          15. p eF,  vS,  R
 6362  Gb 17 31.9   -67  03 s  Ara   10.7    8.3  glob.  cl.  ,  cB,  L,  vgmbM,  rrr,  st  14...17
 6374  OC 17 32.3   -32  36 s  Sco    3.     9.0  Cl,  S,  P,  B*  inv
 6384  Gx 17 32.4   +07  04 s  Oph    6.0   10.6  pB,  S,  vlE
 6389  Gx 17 32.7   +16  24 s  Her    3.1   14. p F,  S,  iF,  er
I4657   ? 17 32.7   -17  31 x  Oph                vF,  *11  np  2'
I1262  Gx 17 33.0   +43  45 u  Her    1.5   15. p eF,  pS,  R,  1st  of  3
I1263  Gx 17 33.1   +43  49 u  Her    1.7   15. p eF,  pS.,  R,  2nd  of  3
I1264  Gx 17 33.3   +43  38 u  Her    1.4   16. p eF,  pS,  R,  3rd  of  3
I4659     17 34.2   -17  56 d  Oph                pF,  S,  *8  f  21s  ,  3'  n
I4655     17 34.6   -60  43 d  Ara                eF,  eS,  mE  170deg
 6383 C+N 17 34.8   -32  34 s  Sco   80.     5.5  Cl,  st  13,  *6-7  in  M
 6410   * 17 35.2   +60  49 r  Dra                eeF,  S,  R,  nearly  bet  2  st,  sp  of  2
 6380  Gb 17 35.4   -39  04 s  Sco    3.9         eF,  pS,  lE,  *9  att
 6411  Gx 17 35.6   +60  48 r  Dra          13. p vS,  gbM
 6419  Gx 17 35.9   +68  08 r  Dra          15. p eeF,  eS,  R,  v  diffic
 6420  Gx 17 36.1   +68  01 r  Dra          15. p eeF,  eS,  R,  v  diffic
 6424  Gx 17 36.2   +69  59 r  Dra          15. p vF,  pS,  R
 6388  Gb 17 36.3   -44  44 s  Sco    8.7    6.9  glob.  cl.  ,  vB,  L,  R,  pg,  psvmbM,  rrr,  st
   17...
 6422  Gx 17 36.3   +68  02 r  Dra          15. p eF,  pS,  R,  nearly  bet  2  st
 6409  Gx 17 36.6   +50  46 r  Dra          15. p vF,  S,  R
 6423  Gx 17 36.7   +68  09 r  Dra          15. p eeF,  vS,  R,  *  close  f
I1265  Gx 17 36.7   +42  05 u  Her    2.1   14. p eeF,  S,  lE
 6434  Gx 17 36.8   +72  05 r  Dra          13. p vF,  vS,  R,  stellar,  *8  s
I4654  Gx 17 37.1   -74  23 c  Aps    1.7         eF,  eS,  R,  vmbM
I4658     17 37.2   -59  35 d  Ara                F,  PN  ,  15  mag
 6402  Gb 17 37.6   -03  15 s  Oph   11.7    7.6  !  glob.  cl.  ,  B,  vL,  R,  eRi,  vgmbM,  rrr,  st
   15;  =
I4656  Gx 17 37.7   -63  44 c  Ara    2.2         eeF,  vS,  eE  90deg  ,  cbM
 6396  OC 17 38.1   -35  00 s  Sco    3.     8.5  Cl,  pL,  lRi,  lC
 6418  Gx 17 38.1   +58  43 r  Dra          14. p eF,  pS,  R
 6406   - 17 38.3   +18  50 r  Her                vF,  eS,  stellar
 6401  Gb 17 38.6   -23  55 s  Oph    5.6    9.5  pB,  pL,  R,  *12  f  inv
 6461  Gx 17 38.7   +73  30 r  Dra          15. p eF,  pS,  R,  5  st  nr
I1267  Gx 17 38.7   +59  23 v  Dra    1.7         eeF,  pS,  R,  v  diffic
 6408  Gx 17 38.8   +18  52 r  Her          14. p F,  S,  iR,  gbM
 6404  OC 17 39.6   -33  15 s  Sco    5.    11. p Cl,  F,  L,  pRi,  lC,  st  13...15
 6405  OC 17 40.1   -32  13 s  Sco   15.     4.2  Cl,  L,  iR,  lC,  st  7,  10...;  = M6
 6435  Gx 17 40.1   +62  37 r  Dra          15. p eeF,  vS,  R,  vF  D*  nr  f
 6397  Gb 17 40.7   -53  40 s  Ara   25.7    5.7  glob.  cl.  ,  B,  vL,  Ri,  st  13
 6413   - 17 40.7   +12  37 r  Oph                vF,  vS,  smbM
 6400  OC 17 40.8   -36  57 s  Sco    8.     9.  p Cl,  pL,  pRi,  iR,  st  9...10
 6436  Gx 17 41.2   +60  27 r  Dra          15. p eeF,  pS,  lE,  ***   nr
 6417  Gx 17 41.7   +23  40 r  Her          14. p pF,  S,  vlbM
 6456  Gx 17 42.4   +67  34 r  Dra          15. p eeF,  eS,  R,  v  diffic,  bet  2  st
 6398  Gx 17 42.7   -61  41 A  Pav                eF  hazy  *  only,  p  of  2
 6457  Gx 17 42.8   +66  28 r  Dra          14. p F,  vS,  R,  bM
 6403  Gx 17 43.2   -61  41 A  Pav                eF  hazy  *  only,  f  of  2
 6392  Gx 17 43.5   -69  47 c  Aps    1.5         cF,  S,  R,  glbM,  *13  sp
 6463  Gx 17 43.5   +67  35 r  Dra          15. p eeF,  S,  R,  v  diffic,  2nd  of  6
 6427  Gx 17 43.6   +25  29 r  Her          14. p vF,  vS,  stellar
 6449  Gx 17 43.7   +56  47 r  Dra          14. p vF,  pS,  R
 6428   - 17 43.9   +25  32 r  Her                vF,  S,  stellar
 6477  Gx 17 43.9   +67  37 r  Dra                eeF,  eS,  R,  v  diffic,  *  nr
 6429  Gx 17 44.0   +25  21 r  Her          14. p F,  S,  stellar
 6433  Gx 17 44.0   +36  46 r  Her          14. p vF,  S,  pmE,  bM
 6470  Gx 17 44.1   +67  34 r  Dra          15. p eeF,  vS,  R,  v  diffic,  3rd  of  6
 6471  Gx 17 44.1   +67  34 r  Dra          15. p eeF,  eS,  R,  *  nr,  4th  of  6
 6472  Gx 17 44.2   +67  36 r  Dra          15. p eeF,  eS,  R,  v  diffic,  5th  of  6
 6431   - 17 44.3   +25  30 r  Her                vF,  vS,  R
 6448   - 17 44.3   +53  32 r  Dra                vF,  pS,  R,  lbM
 6415   - 17 44.4   -35  01 r  Sco                nebs  portion  of  Milky  Way
 6416  OC 17 44.4   -32  21 s  Sco   18.     5.7  Cl,  vL,  Ri,  lC
 6430 Ast 17 44.6   +18  09 r  Her                vF,  S,  mE
 6443  Gx 17 44.6   +48  05 r  Her          15. p eF,  pS,  lE
 6462  Gx 17 44.7   +61  53 r  Dra          14. p F,  eS,  R,  PN  ?
 6426  Gb 17 44.9   +03  00 s  Oph    3.2   11.2  vF,  cL,  E,  vlbM
 6454  Gx 17 44.9   +55  42 s  Dra    1.4   15. p vF,  pS,  R,  lbM
 6407  Gx 17 45.0   -60  44 c  Pav    1.9         eF,  S,  R,  3  st  nr
I4663  Pl 17 45.5   -44  54 s  Sco    0.2   13. p PN , stell
I1266     17 45.6   -46  06 d  Ara                stellar  (gaseous  spectrum)
 6421   - 17 45.8   -33  42 r  Sco                Cl,  vL,  pRi,  st  8...12
 6464  Gx 17 45.8   +60  53 r  Dra          15. p eeF,  pS,  R,  s  of  4  st
I4666  Gx 17 45.8   +55  46 m  Dra    0.6   16. p eF*,  slightly  nebs
 6459  Gx 17 45.9   +55  45 r  Dra          16. p eF,  eS,  R,  r
 6446  Gx 17 46.1   +35  33 r  Her          15. p eF,  vS,  iR
 6447  Gx 17 46.3   +35  33 r  Her          14. p vF,  S,  R
I4665  OC 17 46.3   +05  43 s  Oph   41.     4.2  Cl,  co
I4667     17 46.3   +55  53 d  Dra                2  stell  neb  susp
 6425  OC 17 46.9   -31  32 s  Sco    8.     7.2  Cl,  pS,  lRi,  lC,  st  10...12
 6442  Gx 17 46.9   +20  45 r  Her          14. p pF,  S,  iR,  gbM
 6474   - 17 46.9   +57  20 r  Dra                eF,  pS,  R,  n  of  3,  3  st  nr
I4668     17 46.9   +57  24 d  Dra                eF,  *  3'  n
 6473  Gx 17 47.0   +57  20 r  Dra          15. p eeF,  S,  R,  s  of  2
I4662  Gx 17 47.1   -64  38 s  Pav    2.2   11.4  F,  pS,  lE
I4669  Gx 17 47.2   +61  26 x  Dra                eF,  S;  eF  st  inv?
 6432     17 47.4   -24  53 D  Sgr                only  4  st  12-13
 6450   - 17 47.5   +18  35 r  Her                vF,  vS,  B*  f  2';  nonexistent?
I1270   * 17 47.8   +62  13 x  Dra                eeF,  S,  R,  v  diffic,  6488  f
 6452  Gx 17 48.0   +20  51 r  Her          15. p eeF,  S
 6466  Gx 17 48.2   +51  26 r  Dra          15. p eF,  vS,  R,  bet  2  st
 6439  Pl 17 48.3   -16  29 s  Sgr    0.1   14. p PN , stellar  =  13m
 6479  Gx 17 48.3   +54  10 r  Dra          14. p eF,  pS,  R,  3  st  n
 6478  Gx 17 48.6   +51  09 s  Dra    1.9   14. p pB,  S,  vmE,  spindle
 6440  Gb 17 48.9   -20  22 s  Sgr    5.4    9.7  pB,  pL,  R,  bM
I4664  Gx 17 49.0   -63  15 c  Pav    1.7         eF,  vS,  cE,  cbM
 6437   - 17 49.1   -35  26 r  Sco                Cl,  F,  eL,  vS  st  +  neb
 6445  Pl 17 49.2   -20  01 s  Sgr    0.6   13. p pB,  pS,  R,  gbM,  r,  *15  np
 6458  Gx 17 49.2   +20  49 r  Her          15. p eF,  vS,  stellar
 6488  Gx 17 49.3   +62  14 r  Dra          14. p pF,  pS,  E
 6503  Gx 17 49.4   +70  09 s  Dra    6.2   10.2  B  or  pB,  L,  mE,  *9  f  4'
 6444  OC 17 49.5   -34  49 s  Sco   12.          Cl,  vL,  vRi,  st  12...13
 6460  Gx 17 49.6   +20  46 r  Her          14. p vF,  pL,  iR
 6508  Gx 17 49.9   +72  02 r  Dra          14. p vF,  S,  3  st  nr
 6489  Gx 17 50.0   +60  06 r  Dra          15. p eeF,  pL,  lE,  bet  2  st
 6491  Gx 17 50.1   +61  32 r  Dra          14. p pF,  eS,  vF*  att,  np  of  2
 6441  Gb 17 50.2   -37  03 s  Sco    7.8    7.4  glob.  cl.  ,  vB,  pL,  R,  vgmbM,  rrr,  st  18
 6493  Gx 17 50.4   +61  33 v  Dra    1.4         F,  eS,  R,  PN  ?,  F*  vnr,  sf  of  2
 6451  OC 17 50.7   -30  13 s  Sco    8.     8.  p Cl,  pL,  pRi,  bifid,  st  12...
 6467  Gx 17 50.7   +17  32 s  Her    2.7   15. p vF,  vS,  lE
 6468  Gx 17 50.7   +17  32 u  Her    2.3   14. p vF,  S,  R
I1268     17 50.7   +17  13 D  Her                eeF,  pS,  R,  v  diffic
 6453  Gb 17 50.9   -34  36 s  Sco    3.5    9.9  cL,  iR,  pmbM,  r
 6498   - 17 51.0   +59  29 r  Dra                pF,  pS,  R,  F*  vnr,  sf  of  2
I4661  Gx 17 51.0   -74  02 c  Aps    2.5         eF,  vS,  R,  cbM
 6497  Gx 17 51.2   +59  30 r  Dra          14. p eF,  pS,  lE,  *  close  n,  np  of  2
 6505  Gx 17 51.3   +65  33 r  Dra          15. p eeF,  vS,  R
 6484  Gx 17 51.7   +24  30 r  Her          13. p eF,  vS,  R,  mbM
 6482  Gx 17 51.8   +23  04 s  Her    2.3   11.3  !  vF,  S,  R,  vsvmbMvSRN
 6485  Gx 17 51.8   +31  28 r  Her          14. p vF,  vS,  R
 6455   - 17 52.0   -35  23 r  Sco                Cl,  rr,  st  eS  +  neb
I1269  Gx 17 52.1   +21  34 v  Her    1.9         eeF,  pL,  R,  2  F  st;  *10  sp  4'
 6486  Gx 17 52.6   +29  50 r  Her          15. p vS*  slightly  nebs
 6487  Gx 17 52.7   +29  51 r  Her          14. p F,  S,  R,  gbM
 6481  D* 17 52.8   +04  10 r  Oph                vS,  bM
 6465     17 52.9   -25  24 D  Sgr                only  2  F  D  st
 6469  OC 17 52.9   -22  21 s  Sgr   12.     8.  p Cl,  pRi  (in  Milky  Way)
 6476   - 17 53.8   -29  08 r  Sgr                neb  or  nebs  part  of  Milky  Way
 6475  OC 17 53.9   -34  49 s  Sco   80.     3.3  Cl,  vB,  pRi,  lC,  st  7...12;  = M7
 6510     17 54.0   +60  48 D  Dra                eeF,  pS,  lE,  v  diffic
 6538  Gx 17 54.2   +73  25 r  Dra          14. p eF,  vS,  lE,  bet  2  eF  st
 6490  Gx 17 54.5   +18  23 r  Her          14. p vF,  vS,  stellar
 6480   - 17 54.6   -30  26 r  Sco                neb  or  nebs  part  of  Milky  Way
 6511     17 54.7   +60  48 D  Dra                F,  pL,  bM
 6495  Gx 17 54.8   +18  20 r  Her          14. p F,  S,  R
 6512  Gx 17 54.8   +62  39 r  Dra          15. p vF,  R,  1st  of  3
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I4670   Nb 17 55.1   -21 48 x  Sgr    5.           stellar,  12.5  mag
I4671      17 55.1   -10 17 d  Ser                 spiral?  (edge  of plate)
 6516   Gx 17 55.2   +62 40 r  Dra         15. p vF,  vS,  2nd  of  3
 6499   D* 17 55.3   +18 23 r  Her                 S  D* in neb
 6521   Gx 17 55.8   +62 37 r  Dra         14. p F,  pL,  3rd  of  3
 6500   Gx 17 56.0   +18 20 s  Her    2.5  13. p vF,  vS,  sp  of  2
 6504   Gx 17 56.0   +33 12 s  Her    2.5  13. p F,  vmE,  sbM
 6534   Gx 17 56.0   +64 19 r  Dra         15. p eeF,  pS,  R
 6501   Gx 17 56.1   +18 22 s  Her    2.0  12.3  vF,  vS,  nf  of  2
 6494   OC 17 56.8   -19 01 s  Sgr   27.     5.5  Cl,  B,  vL,  pRi,  lC,  st  10...;  = M23
 6536   Gx 17 57.3   +64 56 r  Dra         14. p vF,  pL,  R
 6515   Gx 17 57.4   +50 44 r  Dra         14. p vF,  vS,  R,  2  B  st  nr
I4677   Gx 17 58.3   +66 38 m  Dra    1.0  15. p vF,  S;  6543  f  16s  .5
 6543   Pl 17 58.6   +66 38 s  Dra    5.8   9. p PN , vB,  pS,  sbMvSN
 6496   Gb 17 59.0   -44 16 s  Sco    6.9   9.2  neb  +  Cl,  pL,  mE,  gvlbM
 6532   Gx 17 59.1   +56 13 r  Dra         15. p eeF,  pS,  R
 6524   Gx 17 59.2   +45 55 r  Her         14. p pF,  pS,  lE
 6509   Gx 17 59.4   +06 17 s  Oph    2.3  13. p vF,  pL,  irrR,  lbM
 6483   Gx 17 59.5   -63 40 r  Pav                 F,  S,  E,  bM,  bet  2  st  10
 6513   Gx 17 59.5   +24 54 r  Her         14. p vF,  vS,  stellar
 6507   OC 17 59.6   -17 24 s  Sgr    7.   10. p Cl,  pS,  lRi,  lC
 6518   Gx 17 59.7   +28 52 r  Her         15. p 2 vF,  close  st  in  vF,  vS  neb
 6542   Gx 17 59.7   +61 22 s  Dra    1.5  14. p eF,  S,  mE,  2  st  sp
 6506    - 17 59.8   -24 39 r  Sgr                 Cl,  Ri,  eL,  vlC
 6552   Gx 18 00.1   +66 36 r  Dra         14. p F,  pS,  iR
 6517   Gb 18 01.8   -08 58 s  Oph    4.3  10.3  pB,  pL,  R,  rr
 6527   Gx 18 01.8   +19 44 r  Her         15. p eeF,  vS,  R
 6525    - 18 02.1   +11 03 r  Oph                 Cl,  P,  st  L
 6514  C+N 18 02.3   -23 02 s  Sgr   29.     6.3  !!!  vB,  vL,  trifid,  D*  inv;  = M20
I4672      18 02.4   -62 50 d  Pav                 eeF,  eS,  vE  45deg  ,  cbM
 6526   Nb 18 02.6   -23 35 s  Sgr   40.           F,  L,  cE
 6492   Gx 18 02.8   -66 25 r  Pav                 pF,  S,  pmE  90deg  ,  *12  att  f
I4676   Gx 18 02.8   +11 49 z  Oph         16. p eF,  vS
I4675      18 03.2   -09 15 d  Oph                 doubtful,  not  seen  a  second  time
I4673   Pl 18 03.3   -27 06 s  Sgr    0.3          PN , 13 mag, *13 nf 33"
 6519    - 18 03.4   -29 48 r  Sgr                 vF,  np  6522
 6520   OC 18 03.4   -27 54 s  Sgr    6.    8. p Cl,  pS,  Ri,  lC,  st  9...13
 6522   Gb 18 03.6   -30 02 s  Sgr    5.6   8.6  glob.  cl.  ,  B,  pL,  R,  gvmbM,  rrr,  st  16
 6523   Nb 18 03.8   -24 23 s  Sgr   90.    5.8  !!!  vB,  eL,  eiF,  with  L  Cl;  = M8
 6535   Gb 18 03.8   -00 18 s  Ser    3.6  10.6  pF,  L,  diam  1'  or  2'
 6502   Gx 18 04.2   -65 25 c  Pav    1.2          vF,  vS,  f  *  of  D*  inv
 6531   OC 18 04.6   -22 30 s  Sgr   13.     5.9  Cl,  pRi,  lC,  st  9...12;  = M21
 6528   Gb 18 04.8   -30 03 s  Sgr    3.7   9.5  glob.  cl.  ,  pF,  cS,  R,  gbM,  rrr,  st  16
 6530   OC 18 04.8   -24 20 s  Sgr   15.     4.6  Cl,  B,  L,  pRi,  f  M8
 6539   Gb 18 04.8   -07 35 s  Ser    6.9   9.6  no  description
 6562   Gx 18 04.9   +56 15 r  Dra         14. p F,  pS,  R,  bM,  bet  2  st
I1272   OC 18 04.9   +25 05 x  Her                 S  Cl
I1273   OC 18 05.0   +25 07 x  Her                 vF,  S  Cl  with  neb?  *10  f  3'
 6533    - 18 05.1   -24 53 r  Sgr                 eL,  eiF,  st  f
 6547   Gx 18 05.1   +25 13 r  Her         14. p F,  vS,  E,  mbM
 6537   Pl 18 05.2   -19 51 s  Sgr    0.2  13. p PN , B,  S,  stellar
 6560   Gx 18 05.3   +46 52 s  Her    1.3  14. p eeF,  pS,  iR
 6529    - 18 05.5   -36 18 r  Sgr                 Cl  in  Milky  Way
I1271      18 05.5   -24 27 D  Sgr                 eF,  vL,  B*  inv,  part  of  6523
 6549   Gx 18 05.8   +18 32 r  Her         15. p vF,  pL,  iR,  near  6548
 6548   Gx 18 06.0   +18 35 D  Her         13. p cF,  S,  lE,  r;  =  6550
 6550   Gx 18 06.0   +18 35 D  Her         13. p vF,  pS,  R,  sev  F  st  inv,  near  6549
 6540   OC 18 06.3   -27 49 s  Sgr    1.   15. p pF,  S,  iE,  er  or  Cl
 6566   Gx 18 07.0   +52 16 r  Dra         15. p eF,  vS,  R,  *16  nr
 6546   OC 18 07.2   -23 20 s  Sgr   13.     8.0  Cl,  vL,  vRi
 6544   Gb 18 07.3   -25 00 s  Sgr    8.9   8.3  cF,  pL,  iR,  r
 6555   Gx 18 07.8   +17 36 s  Her    2.1  12. p F,  L,  R,  vglbM
 6541   Gb 18 08.0   -43 42 s  CrA   13.1   6.6  glob.  cl.  ,  B,  R,  eC,  gbM,  rrr,  st  15...16
I4678      18 08.0   -23 52 d  Sgr                 B,  S,  E
I4688   Gx 18 08.1   +11 42 u  Oph    1.6  15. p vF,  pS,  dif,  *12  close  f
I4674   Gx 18 08.2   -62 24 c  Pav    1.5          eF,  vS,  eE  80deg  ,  cbM  stell  N
I4681      18 08.3   -23 24 d  Sgr                 S  neb  or  neb*
I4683      18 08.7   -26 14 d  Sgr                 vF,  eeL
I4691   Gx 18 08.7   +11 50 z  Oph         15. p F,  S,  iF,  1  or  2  F  st  inv
 6598   Gx 18 08.8   +69 04 r  Dra         14. p eF,  pS,  R
 6551    - 18 09.0   -29 33 r  Sgr                 vF,  vS,  R,  rr
 6554    - 18 09.1   -18 26 r  Sgr                 Cl,  pRi,  vlC,  st  L  &  S
 6564    - 18 09.1   +17 24 r  Her                 eF,  vS
I4684   Nb 18 09.1   -23 25 s  Sgr    3.           S  neb  or  neb*
I4693      18 09.2   +17 20 d  Her                 eF,  S,  bM,  sev  eF  st  inv
 6553   Gb 18 09.3   -25 54 s  Sgr    8.1   8.3  glob.  cl.  ,  F,  L,  lE,  vglbM,  rr,  st  20
I4685   Nb 18 09.3   -23 59 s  Sgr   10.           *7.5  in  L,  dif  neb
I1274   Nb 18 09.5   -23 44 s  Sgr    9.           3  st  8.5  to  9m  in  pL  neb
 6592   Gx 18 09.9   +61 25 r  Dra         15. p vF,  vS,  R
 6556      18 10.0   -27 31 D  Sgr                 F,  vL,  cE,  lbM,  rr;  no  nebulosity?
 6559   Nb 18 10.0   -24 06 s  Sgr    8.           vF,  vL,  lE,  **  inv
I1275   Nb 18 10.0   -23 50 s  Sgr   10.           2  st  8  &  8.5  in  pL  neb
 6594   Gx 18 10.2   +61 07 r  Dra         15. p vF,  vS,  R
I1277   OC 18 10.2   +31 00 x  Her                 S  Cl
 6558   Gb 18 10.3   -31 46 s  Sgr    3.7          glob.  cl.  ,  pB,  pL,  R,  glbM,  rrr,  st  16
 6561    - 18 10.5   -16 48 r  Sgr                 Cl,  L,  lC,  st  cL
I1278      18 10.5   +31 09 d  Her                 vF,  vS,  sev  st  susp
I4690      18 10.5   -19 49 d  Sgr                 *9.5  in  neb,  E  spnf
I1276   Gb 18 10.7   -07 12 s  Ser    7.1          eeF,  vL,  v  diffic,  D*  close  p
 6575   Gx 18 10.8   +31 05 r  Her         14. p pB,  S,  R
 6571   Gx 18 10.9   +21 14 r  Her         15. p eF,  vS,  stell
 6582   Gx 18 11.0   +49 53 r  Her         15. p eeF,  pS,  R
 6570   Gx 18 11.1   +14 06 s  Oph    1.8  13. p pF,  pL,  R
I1279      18 11.1   +36 02 d  Her                 eeF,  pS,  R,  v  diffic
 6597   Gx 18 11.3   +61 10 r  Dra         15. p vF,  vS,  R,  B*  nr
I4679   Gx 18 11.4   -56 15 c  Tel    1.9          cF,  S,  R,  vmbM;  susp
I1281    ? 18 11.6   +36 01 x  Her                 =  IC  1279
 6576   Gx 18 11.8   +21 25 r  Her         15. p eF,  vS
 6565   Pl 18 11.9   -28 11 s  Sgr    0.2  13. p PN , stellar
 6574   Gx 18 11.9   +14 59 s  Her    1.4  12.0  pB,  S,  R
 6601   Gx 18 11.9   +61 26 r  Dra         15. p eF,  pS,  R
 6563   Pl 18 12.0   -33 52 s  Sgr    0.8  14. p PN , F,  L,  cE,  hazy  border
 6572   Pl 18 12.1   +06 51 s  Oph    0.1   9. p PN , vB,  vS,  R,  l  hazy
 6577   Gx 18 12.1   +21 28 r  Her         14. p vF,  S
I1280   Gx 18 12.2   +25 40 m  Her    0.4  15. p *13,  nebulous?
 6545   Gx 18 12.3   -63 46 A  Pav                 eeF,  eeS,  R
 6579      18 12.3   +21 26 D  Her                 F,  p  of  Dneb
 6607   Gx 18 12.3   +61 19 r  Dra         15. p eF,  pS,  R,  v  diffic
 6580      18 12.4   +21 26 D  Her                 F,  f  of  Dneb
 6585   Gx 18 12.4   +39 37 r  Her         13. p eeF,  S,  eE,  bet  sev  B  st
I4697   Gx 18 12.5   +25 26 u  Her    1.6  15. p F,  S,  iF,  r
 6581   Gx 18 12.6   +25 25 r  Her         15. p eF,  dif,  bet  2  F  st
 6608   Gx 18 12.6   +61 19 r  Dra         15. p vF,  eS,  R,  vF*  nr
 6609   Gx 18 12.6   +61 19 r  Dra         15. p vF,  pS,  lE,  F*  nr
 6568   OC 18 12.8   -21 36 s  Sgr   13.     9. p Cl,  vL,  lC
 6621   Gx 18 12.9   +68 22 s  Dra    2.5  13.1  pF,  pS,  R,  lbM,  s  of  2
 6622   Gx 18 13.0   +68 20 r  Dra         13. p pF,  pS,  R,  lbM,  n  of  2
I4680   Gx 18 13.5   -64 29 c  Pav    1.7          eF,  vS,  eE  85deg  ,  cbM
 6569   Gb 18 13.6   -31 50 s  Sgr    5.8   8.7  glob.  cl.  ,  cB,  L,  R,  rrr,  st  15...
I4686   Gx 18 13.6   -57 44 c  Pav    0.5          bM,  mag  14
 6567   Pl 18 13.7   -19 05 s  Sgr    0.1  12. p PN , stell,  11  mag,  in  a  Cl
 6586   Gx 18 13.7   +21 05 r  Her         14. p eF,  S,  R
I4687   Gx 18 13.7   -57 44 c  Pav    1.5          bM  mag  14
I4689   Gx 18 13.7   -57 45 c  Pav    0.9          bM,  mag  14
I4708   Gx 18 13.7   +61 09 z  Dra         15. p eF,  eS,  v  diffic,  6617  nr
 6573    - 18 13.8   -22 10 r  Sgr                 Cl,  st  vS
 6587   Gx 18 13.9   +18 50 s  Her    2.3  12.1  F,  vS,  R,  stell
 6591   Gx 18 14.0   +21 02 r  Her                 eeF,  vS,  stell
 6617   Gx 18 14.1   +61 19 r  Dra         15. p eeF,  pL,  R,  v  diffic
I1282    ? 18 14.1   +21 06 x  Her                 vF,  2  or  3  st  susp
 6593   Gx 18 14.2   +22 17 r  Her         15. p vF,  vS,  R,  lbM
 6606   Gx 18 14.7   +43 16 r  Lyr         14. p vF,  S,  R,  gbM,  vF*  inv
I4692   Gx 18 14.8   -58 42 c  Pav    1.7          F,  S,  iF,  susp
I4694   Gx 18 15.4   -58 13 c  Pav    2.1          F,  S,  eE  20deg  ,  lbM
 6599   Gx 18 15.6   +24 56 r  Her         13. p pF,  vS,  R,  gbM,  S*  att  f
 6600    - 18 15.7   +25 02 r  Her                 F,  vS,  stell;  =  6602
 6583   OC 18 15.8   -22 08 s  Sgr    3.   10. p Cl,  pRi,  pC,  cE,  st  13...
I1285   OC 18 16.1   +25 06 x  Her                 S  Cl
 6612   Gx 18 16.2   +36 05 r  Lyr         15. p eeF,  eS,  R,  v  diffic
I1286   Gx 18 16.2   +55 34 u  Dra    1.5  15. p eF,  pS,  R,  2  st  nr
 6578   Pl 18 16.3   -20 27 s  Sgr    0.2  13. p PN , stellar  =  13  mag
I4682   Gx 18 16.4   -71 35 c  Pav    2.5          vF,  cS,  cE  140deg  ,  stell  N
I4701   Nb 18 16.5   -16 44 s  Sgr   60.           eL,  conn  with  cloud  IC  4715
 6602   Gx 18 16.6   +25 02 r  Her         14. p Cl,  vS,  st  F,  30",  nebulous?
 6589      18 16.9   -19 46 D  Sgr    5.           D*  in  centre  of  eF,  pL  neby
 6590  C+N 18 17.0   -19 53 s  Sgr    4.           D*  in  centre  of  pF,  pL,  R  neby;  =  6595
 6595   OC 18 17.0   -19 53 s  Sgr   11.     7. p F,  pL,  cE,  **  inv;  =  IC  4700
 6605   OC 18 17.1   -14 58 s  Ser                 6. p Cl,  lRi,  lC,  st  10...12
I4700      18 17.1   -19 52 x  Sgr                 *9.4  in  dense  neb;  =  6595
 6610    - 18 17.2   +15 00 r  Her                 F,  S,  E,  mbM,  r
I1283   Nb 18 17.3   -19 44 d  Sgr                 *9.3  nebulous
I4695      18 17.4   -58 55 d  Pav                 eF,  vS,  R,  bM,  sev  st  nr;  susp
 6596   OC 18 17.5   -16 40 s  Sgr                 Cl,  lC
I1284   Nb 18 17.7   -19 40 x  Sgr   10.           *7.6  in  neb,  15'  diam
 6616   Gx 18 17.8   +22 15 r  Her         15. p vF,  eS,  mE,  2  st  9-10  nr,  one  p  2s  ,  0'.6  s
 6604  C+N 18 18.1   -12 14 s  Ser   60.     6.5  Cl,  lRi,  lC
 6603   OC 18 18.4   -18 25 s  Sgr    5.   11. p !,  Cl,  vRi,  vmC,  R,  st  15  (Milky  Way)
I4699   Pl 18 18.5   -45 59 s  Tel    0.2  12. p PN , stellar
 6584   Gb 18 18.6   -52 13 s  Tel    7.9   9.2  glob.  cl.  ,  cB,  cL,  R,  gmbM,  rrr,  st  15
 6615   Gx 18 18.6   +13 16 s  Oph    1.2  15. p vF,  vS
 6611  C+N 18 18.8   -13 47 s  Ser   35.     6.0  Cl,  at  least  100  st  L  &  S;  =  M16
 6619   Gx 18 18.8   +23 40 r  Her         14. p F,  S,  E
I4703   OC 18 18.9   -13 47 x  Ser                 B,  eL,  Cl  M16  inv
 6623   Gx 18 19.5   +23 43 r  Her         14. p pF,  S,  R,  bM
I4706      18 19.6   -16 01 d  Sgr                 *9.2  in  S  neb,  conn  with  M17
 6643   Gx 18 19.8   +74 34 s  Dra    3.9  11.1  pB,  pL,  E  50deg  ,  2  st  p
 6613   OC 18 19.9   -17 08 s  Sgr    9.    6.9  Cl,  P,  vlC;  =  M18
I4707      18 20.1   -16 01 d  Sgr                 *9.4  in  S  neb,  conn  with  M17
I4696   Gx 18 20.3   -64 44 c  Pav    2.4          neb,  susp
 6618  C+N 18 20.8   -16 11 s  Sgr   46.     6.0  !!!,  B,  eL,  eiF,  2  hooked;  =  M17
I4698      18 21.0   -63 22 d  Pav                 eF,  vS,  eE  45deg  ,  stell  N
 6557   Gx 18 21.4   -76 34 A  Oct                 vF,  vS,  R,  glbM
 6588      18 21.5   -63 48 D  Pav                 sev  vF  st  (no  neb)
 6636   Gx 18 22.0   +66 38 r  Dra         14. p eeF,  pS,  R,  3  st  nr
 6628   Gx 18 22.2   +23 29 r  Her         15. p vF,  S,  lE,  bM
 6627   Gx 18 22.7   +15 42 s  Her    1.5  13.2  vF,  pL
 6620   Pl 18 22.9   -26 49 s  Sgr    0.1  15. p PN , stellar
I4702   Gx 18 23.1   -59 14 c  Pav    1.6          eF,  eS,  * in disc,  ring  susp
 6625   OC 18 23.2   -12 03 s  Sct        9. p Cl,  lC,  lRi,  st  11...12
 6624   Gb 18 23.7   -30 22 s  Sgr    5.9   8.3  glob.  cl.  ,  vB,  pL,  R,  rrr,  st  16
 6654   Gx 18 24.1   +73 11 s  Dra    3.0  11.6  *12-13  in  pB,  pL  neby
 6651   Gx 18 24.3   +71 36 s  Dra    1.8  14. p eeF,  pS,  lE,  v  diffic
I4709      18 24.3   -56 12 d  Tel                 eF,  vS,  vE  0deg  ,  stell  N;  susp
 6626   Gb 18 24.5   -24 52 s  Sgr   11.2    6.9  !,  glob.  cl.  ,  vB,  L,  R,  geCM,  rrr,  st
    14...16;  =
 6632   Gx 18 25.0   +27 32 s  Her    3.1  13. p F,  S,  R,  gbM
 6614   Gx 18 25.2   -63 14 r  Pav                 vF,  S,  R,  gvlbM,  *9  p
 6650   Gx 18 25.4   +68 00 r  Dra         15. p vF,  vS,  R
 6648    - 18 25.6   +64 59 r  Dra                 S,  pmE,  **  inv
 6629   Pl 18 25.7   -23 12 s  Sgr    0.3  12. p plan  or  glob.  cl.  ,  pB,  eeS,  R
 6438   Gx 18 26.    -85 25 s  Oct    2.6  13. p pB,  R,  vgbM
I4715  C+N 18 26.2   -18 26 F  Sgr   30.           eeL  cloud  of  st  and  neb
I4733      18 26.5   +64 58 d  Dra                 vF,  stellar
 6631   OC 18 27.2   -12 02 s  Sct    5.   12. p Cl,  pL,  pRi,  st  12...15
 6635   Gx 18 27.6   +14 49 s  Her    1.3  15. p vF,  S,  R
 6633   OC 18 27.7   +06 34 s  Oph   27.     4.6  Cl,  lC,  st  L
I4704   Gx 18 27.9   -71 37 c  Pav    3.2          cB,  bM
 6640   Gx 18 28.1   +34 18 r  Lyr         14. p vF,  S,  R,  vlbM
I4711      18 28.1   -64 57 d  Pav                 eF,  eS,  eE  125deg  ,  stell  N
I4705   Gx 18 28.2   -71 42 c  Pav    2.7          eF,  eS,  R
I4710   Gx 18 28.7   -66 59 s  Pav    4.2  12. p vF,  vS,  R,  bM
 6641   Gx 18 28.8   +22 54 r  Her         14. p vF,  vS,  R,  bM
I1288   Gx 18 29.4   +39 43 u  Lyr    1.3  14. p v  F,  S,  lE,  3  st  nr
 6646   Gx 18 29.6   +39 52 r  Lyr         13. p F,  S,  iF
I1289      18 29.8   +40 00 d  Lyr                 eeF,  pS,  lE,  3  st  nr
 6634    - 18 29.9   -33 25 r  Sgr                 neb,  without  stars
I4713   Gx 18 30.0   -67 13 c  Pav    1.2          vF
 6639   OC 18 30.1   -13 12 r  Sct                 Cl  (in  Milky  Way)
 6667   Gx 18 30.7   +67 59 s  Dra    2.6  12. p vF,  pL,  lE,  vF  D*  nr
 6638   Gb 18 30.9   -25 30 s  Sgr    5.0   9.2  glob.  cl.  ,  B,  S,  R,  rr
I4714   Gx 18 30.9   -66 39 c  Pav    1.1          vF
I4712   Gx 18 31.1   -71 42 c  Pav    2.1          vF,  vS,  R,  bM
I1287   Nb 18 31.3   -10 50 s  Sct   44.           *5.5  in  L,  E  neb
 6637   Gb 18 31.4   -32 21 s  Sgr    7.1   7.7  glob.  cl.  ,  B,  L,  R,  rrr,  st  14...16;  =  M69
 6647   OC 18 31.5   -17 21 s  Sgr        8. p Cl,  L,  Ri,  lC,  st  vS
I4725   OC 18 31.6   -19 15 s  Sgr   32.     4.6  Cl,  pC;  =  M25
 6642   Gb 18 31.9   -23 29 s  Sgr    4.5   8.8  glob.  cl.  ,  pB,  pL,  iR,  gpmbM  rrr,  st  16
I4762   OC 18 32.5   +67 50 x  Dra                 vF,  eS,  Cl  or  *  with  neb
 6630   Gx 18 32.6   -63 17 A  Pav                 pF,  S,  R,  gbM
 6644   Pl 18 32.6   -25 08 s  Sgr    0.1  12. p PN , stellar
 6645   OC 18 32.6   -16 54 s  Sgr   10.     9. p Cl,  pL,  vRi,  pC,  st  11...15
I4716      18 32.7   -56 58 d  Pav                 eeF,  eS,  lE  90deg  ,  susp
 6657   Gx 18 33.0   +34 02 r  Lyr         14. p vF,  vS,  sbM
 6676   Gx 18 33.2   +66 57 r  Dra         15. p eeF,  pS,  lE,  lbM,  v  diffic
 6678    - 18 33.2   +67 51 r  Dra                 pF,  pS,  R;  nonexistent?
I4719   Gx 18 33.2   -56 44 c  Tel    1.3          eF,  vS,  2  patches,  susp
 6668      18 33.3   +67 08 D  Dra                 pB,  pS,  mE;  =  6677?
I4717   Gx 18 33.3   -57 58 c  Pav    1.5          F,  S,  eE  95deg  ,  stell  N
 6649   OC 18 33.5   -10 24 s  Sct    6.    8.9  Cl,  P,  lC,  pS,  st  9-10,  12...13
 6663   Gx 18 33.5   +40 03 r  Lyr         15. p eeF,  pS,  R,  v  diffic
 6670   Gx 18 33.5   +59 53 r  Dra         15. p eeF,  S,  mE,  v  diffic
I4720   Gx 18 33.5   -58 24 c  Pav    2.5          cF,  S,  eE  165deg  ,  cbM
I4763      18 33.5   +67 08 d  Dra                 vF,  neb*?;  6677  nr
 6677   Gx 18 33.6   +67 08 r  Dra         13. p vF,  vS,  bet  *  v  close  &  vF  D*
 6679   Gx 18 33.6   +67 08 r  Dra         13. p eF,  neb  D*  12.5,  dist  5"
 6672   Gx 18 33.8   +42 48 r  Lyr         15. p 2  close  st,  n  one  nebs
I4718   Gx 18 33.8   -60 08 c  Pav    2.1          cB,  S,  E  125deg  ,  B,  stell  N
 6658   Gx 18 33.9   +22 53 s  Her    1.9  12.9  F,  vS,  lE
 6659    - 18 33.9   +23 34 r  Her                 Cl,  P,  lC
I1291   Gx 18 33.9   +49 16 s  Dra    2.4  14. p eF,  vS,  R,  F,  2  st  12  nf  and  np
I4732   Pl 18 33.9   -22 39 s  Sgr    0.1  13. p PN , stellar
 6662   Gx 18 34.0   +32 03 r  Lyr         15. p F*  in  vF,  vS,  lE  neby
 6665   Gx 18 34.5   +30 42 r  Lyr         14. p vF,  vS
I4721   Gx 18 34.5   -58 30 s  Pav    4.1  13. p F,  cL,  E  150deg
I4722   Gx 18 34.5   -57 48 c  Pav    1.6          F,  vS,  2-branch  spir
 6660      18 34.6   +22 55 D  Her                 pB,  pS,  R,  mbM,  bet  2  st;  =  6661
 6661   Gx 18 34.6   +22 55 s  Her    2.0  11.9  F,  vS,  R,  gbM
 6655    - 18 34.8   -05 59 r  Sct                 pF,  vS,  E
 6690   Gx 18 34.8   +70 32 s  Dra    3.8  13. p pF,  L,  R,  bet  2  st
 6689   Gx 18 34.9   +70 32 t  Dra    3.9  12. p vF,  pS,  *8  f,  7'  dist
 6666      18 35.3   +33 35 D  Lyr                 eF,  S,  R,  v  diffic
 6652   Gb 18 35.8   -32 59 s  Sgr    3.5   8.9  B,  S,  lE,  rrr,  st  15
I4723   Pl 18 35.8   -63 22 x  Pav    0.2  15. p vF,  vS,  R
 6656   Gb 18 36.4   -23 54 s  Sgr   24.0    5.1  !!,  glob.  cl.  ,  vB,  vL,  R,  vRi,  vmC,  st
    11...15;  M
 6664   OC 18 36.7   -08 13 s  Sct   16.     7.8  Cl,  L,  pRi,  vlC
I4726      18 36.9   -62 51 d  Pav                 eF,  vS,  R,  eF*  0'.5  nf
 6687   Gx 18 37.2   +59 37 r  Dra         15. p eF,  pL,  R,  bet  2  st
 6671   Gx 18 37.4   +26 24 r  Lyr         14. p vF,  vS,  R,  mbM
 6675   Gx 18 37.4   +40 04 r  Lyr         13. p vF,  E,  45"
I4727   Gx 18 37.9   -62 42 c  Pav    1.4          vF,  eS,  R
I4728   Gx 18 37.9   -62 32 c  Pav    2.0          eF,  S,  cE  170deg  ,  stell  N
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 6669   Gx 18 38.0   +22  04 r  Her                  eF,  pL
I4734   Gx 18 38.4   -57  29 c  Pav    1.4           vF,  vS,  lE 130deg
I1290      18 38.5   -24  07 D  Sgr                  Cl of half  dozen  st 12...
 6674   Gx 18 38.6   +25  23 s  Her    4.2   12.1    F,  pS,  iR,  bM
I4724      18 38.6   -70  07 d  Pav                  eF,  eS,  cE 170deg
I4736   Gx 18 38.6   -57  54 c  Pav    1.5           eF,  eS,  R
I4731   Gx 18 38.7   -62  57 c  Pav    1.5           vF,  vS,  eE 88deg  ,  stell  N
I4730   Gx 18 38.8   -63  21 c  Pav    1.8           eeF,  eS,  eE  0deg  , *9 s 2'
I4756   OC 18 39.0   +05  27 s  Ser   52.      5.  p Cl,  C
 6691   Gx 18 39.3   +55  38 s  Dra    1.7   14.  p vF,  pL,  R,  pB* s nr
I4735      18 39.7   -62  57 d  Pav                  eF,  vS,  bM
 6680   Gx 18 39.8   +22  18 r  Her                15.  p eF,  S,  close  to  a S*
 6685      18 39.9   +39  59 D  Lyr                  eeF,  vS,  R,  v diffic,  sp  of  2
I4737      18 39.9   -62  36 d  Pav                  eF,  vS,  cE  10deg  ,  bet  2  F  st
I4772   Gx 18 39.9   +40  00 u  Lyr    1.1   15.  p eF,  eS;  6685  f  2s  ,  2'.7  s
 6696   Gx 18 40.0   +59  19 r  Dra                16.  p eeF,  pL,  v diffic
I4729   Gx 18 40.0   -67  26 c  Pav    1.4           vF,  S,  R,  stell  N
 6686   Gx 18 40.1   +40  08 r  Lyr                15.  p eeF,  eS,  R,  v diffic,  nf  of  2
I4738      18 40.4   -61  54 d  Pav                  eeF,  eS,  eF*  sf  0'.5
 6688   Gx 18 40.7   +36  16 r  Lyr                14.  p F,  pS,  R,  bM
I4739      18 40.8   -61  54 d  Pav                  eeF,  eS,  eF*  inv
I4743      18 41.3   -61  46 d  Pav                  vF,  bM
 6682    - 18 41.6   -04  46 r  Sct                  Cl,  L,  Ri,  st  10...18
 6693    * 18 41.6   +36  55 r  Lyr                  vF
I4741      18 41.6   -63  57 d  Pav                  vF,  vS,  lE  20deg  ,  stell  N,  4  F  st  inv
 6692   Gx 18 41.7   +34  49 r  Lyr                14.  p vF,  vS,  irrE,  sev  vF  st  inv
I1293      18 41.7   +56  19 D  Dra                  3  st  14,  of  which  the  f  one  is  nebs
I4744      18 41.8   -63  14 d  Pav                  eeF,  eS,  R,  eF*  inv
I4768   OC 18 41.8   -05  31 x  Sct                  Cl,  D,  st  sc
I4742   Gx 18 41.9   -63  52 c  Pav    1.3           cF,  vS,  R,  bM,  F*  inv
 6683   OC 18 42.2   -06  17 s  Sct   11.     10.  p Cl,  vRi,  vlC  (in  Milky  Way)
I4745   Gx 18 42.6   -64  57 c  Pav    2.2           eF,  vS,  vF*  p  0'.4
 6695   Gx 18 42.7   +40  24 r  Lyr                14.  p vF,  S,  irrE  ns,  vlbM
I4748      18 42.7   -64  05 d  Pav                  eF,  vS,  R,  F*  sf  1'
I4749      18 42.9   -63  13 d  Pav                  eeF,  eS,  3  F  st  nr
I4740   Gx 18 43.0   -68  22 c  Pav    1.1           eeF,  vS,  R,  lbM,  2  eF  st  nr
I4750      18 43.0   -62  58 d  Pav                  eeF,  eS,  R,  *11  np  0'.5
 6681   Gb 18 43.2   -32  18 s  Sgr    7.8    8.1   glob.  cl.  ,  B,  pL,  R,  gbM,  st  14...17;  =
   M70
 6701   Gx 18 43.2   +60  40 s  Dra    1.8   13.  p pB,  pS,  mE,  F*  close  f
I4751      18 43.2   -62  07 d  Pav                  vF,  vS,  R,  bM
I4753      18 43.5   -62  06 d  Pav                  vF,  vS,  R,  bM
I4752      18 43.8   -64  05 d  Pav                  eF,  vS,  R,  vF*  sf  1'
I4757   Gx 18 43.9   -57  10 c  Pav    1.6           eF,  eS,  cE  50deg
I4761   Gx 18 43.9   -52  51 c  Tel    1.7           vF,  bM,  doubtful
I4754   Gx 18 44.0   -61  59 c  Pav    1.4           eF,  pS,  R,  stell  N;  ring?
 6653   Gx 18 44.6   -73  16 c  Pav    1.8           vF,  S,  lE,  glbM
I1292      18 44.8   -27  49 d  Sgr                  stellar,  gaseous  spectrum,  *9.6  sf
I4755      18 45.0   -63  41 d  Pav                  vF,  vS,  eE  90deg  ,  stell  N
 6673   Gx 18 45.1   -62  17 r  Pav                  pF,  S,  R,  psbM,  r
 6694   OC 18 45.2   -09  24 s  Sct   15.      8.0   Cl,  cL,  pRi,  pC,  st  12...15;  =  M26
 6697   Gx 18 45.2   +25  31 r  Her                14.  p F,  vS,  stell
I4759   Gx 18 45.7   -63  05 c  Pav    1.2           eF,  eS,  R
I4760      18 45.7   -62  57 d  Pav                  eF,  vS,  R,  F*  np  1'
I4776   Pl 18 45.8   -33  21 s  Sgr    0.1   12.  p PN  ,  stellar
 6714    - 18 45.9   +66  44 r  Dra                  eeF,  pS,  v  diffic,  sev  B  st  n
I4746      18 45.9   -72  40 d  Pav                  eF,  eS
I4747      18 45.9   -72  37 d  Pav                  vF,  eS,  cE  75deg
 6700   Gx 18 46.0   +32  17 r  Lyr                14.  p eF,  lE,  dif,  iR
I4758      18 46.4   -65  45 d  Pav                  vF,  S,  R
 6702   Gx 18 47.0   +45  42 s  Lyr    2.1   12.2    pF,  S,  lE
I4764      18 47.0   -63  29 d  Pav                  eeF,  eS,  bM
 6703   Gx 18 47.3   +45  33 s  Lyr    2.6   11.4    B,  S,  R,  mbM
I4765   Gx 18 47.3   -63  20 c  Pav    3.6           vF,  S,  R,  bM
I4766      18 47.5   -63  17 d  Pav                  eF,  eS,  bM
I4767   Gx 18 47.7   -63  24 c  Pav    1.3           eF,  eS,  mE  25deg  ,  cbM
I4769   Gx 18 47.7   -63  10 c  Pav    2.1           eF,  vS,  mE  170deg  ,  cbM
I4770      18 48.1   -63  23 d  Pav                  eeF,  eS,  bM
I4777      18 48.1   -53  08 d  Tel                  vF,  PN  ,  lE
 6698    - 18 48.2   -25  55 r  Sgr                  suspected  Cl,  cL,  st  vF
I4774   Gx 18 48.2   -57  56 c  Pav    1.1           eF,  S,  iF,  mbM
I4771      18 48.3   -63  15 d  Pav                  eF,  eS,  R,  bM
I4775   Gx 18 48.4   -57  11 c  Pav    1.4           eF,  eS,  mE  15deg  ,  susp
 6684   Gx 18 49.0   -65  11 s  Pav    3.7   10.5    vB,  pL,  R,  vg,  psvnbM  *7  p
 6711   Gx 18 49.0   +47  39 s  Dra    1.3   14.  p vF,  pS,  R,  lbM
I4791      18 49.0   +19  20 d  Her                  neb;  *6  f  2'
I1294      18 49.9   +40  15 d  Lyr                  eeF,  S,  iR,  v  diffic,  F*  close  nf
I4778   Gx 18 50.0   -61  43 c  Pav    1.5           cF,  vS,  cE  35deg
I4780      18 50.0   -59  14 d  Pav                  eF,  vS,  lE  120deg
I4779      18 50.5   -63  00 d  Pav                  eeF,  eS,  eF*  p  0'.3
 6710   Gx 18 50.6   +26  50 s  Lyr    2.0   12.8    vF,  S,  R,  bM
 6713   Gx 18 50.7   +33  57 r  Lyr                14.  p vF,  S,  R,  bM
 6704   OC 18 50.9   -05  12 s  Sct    6.      9.2   Cl,  B,  60  st  13
I4782   Gx 18 50.9   -55  29 c  Tel    1.6           eeF,  eS,  susp
 6705   OC 18 51.1   -06  16 s  Sct   14.      5.8   !,  Cl,  vB,  L,  iR,  Ri,  *9,  st  11...;  =  M11
I4773   Gx 18 51.3   -69  55 c  Pav    1.6           eF,  dif
 6709   OC 18 51.5   +10  21 s  Aql   13.      6.7   Cl,  pRi,  lC,  iF
I4783      18 51.5   -58  48 d  Pav                  eF,  vS
I4781      18 51.7   -62  47 d  Pav                  3  eeF  st  in  neb
 6699   Gx 18 52.1   -57  19 s  Pav    1.9   13.  p pF,  pS,  lE  90deg  ,  psbM
I4786      18 52.7   -56  42 d  Tel                  eeF,  eS,  mE  0deg
I4784      18 52.9   -63  25 d  Pav                  cF,  S,  R,  bM
I4785   Gx 18 52.9   -59  15 c  Pav    2.9           eF,  vS,  iF,  stell  N
 6712   Gb 18 53.1   -08  42 s  Sct    7.2    8.2   glob.  cl.  ,  pB,  vL,  irr,  vglbM,  rrr
I1296   Gx 18 53.3   +33  04 u  Lyr    1.3   15.  p eF,  pS,  iR,  4'  np  M57
 6720   Pl 18 53.6   +33  02 s  Lyr    2.5    9.0   !!!,  ring  ,  B,  pL,  cE  (in  Lyra);  =  M57
 6716   OC 18 54.6   -19  53 s  Sgr    7.      6.9   Cl,  pRi,  st  9...13
I1295   Pl 18 54.6   -08  50 s  Sct    1.4   15.  p pB,  pL,  gbM
I4788      18 54.7   -63  26 d  Pav                  eeF,  eS,  eE  35deg
 6715   Gb 18 55.1   -30  29 s  Sgr    9.1    7.7   glob.  cl.  ,  vB,  L,  R,  g,  smbM,  rrr,  st  15;
   = M54
 6717   Gb 18 55.1   -22  42 s  Sgr    3.9           F,  S,  rr,  Cl  +  neb
I4802      18 55.1   -22  42 d  Sgr                  neb  *13,  15"  nf  6717
 6747   Gx 18 55.3   +72  47 r  Dra                15.  p eeF,  v  diffic,  pB  st  sf
 6707   Gx 18 55.4   -53  49 v  Tel                  F,  S,  vlE,  gbM
 6708   Gx 18 55.6   -53  43 v  Tel                  pF,  S,  R,  gpmbM,  last  of  group
I4792      18 55.7   -56  25 d  Tel                  eeF,  eS,  mE  160deg  ,  bet  2  st,  susp
I4787   Gx 18 56.1   -68  41 c  Pav    1.4           eF,  dif
I4789   Gx 18 56.3   -68  34 c  Pav    1.4           eF,  eS,  R
 6732   Gx 18 56.4   +52  22 r  Dra                14.  p pB,  vS,  R,  F*  n
I4796   Gx 18 56.5   -54  13 c  Tel    1.6           14m,  bM,  near  edge  of  plate
I4797   Gx 18 56.5   -54  18 s  Tel    2.8   11.3    14m,  bM,  near  edge  of  plate
I4790      18 56.6   -64  56 d  Pav                  cB,  S,  R,  bM
 6706   Gx 18 56.9   -63  10 c  Pav    1.5           vF,  vS,  eE  120deg  ,  stell  N
I4793      18 56.9   -61  23 d  Pav                  eF,  vS,  cE  130deg
 6724    - 18 57.0   +10  22 r  Aql                  Cl
 6731    - 18 57.0   +43  04 r  Lyr                  vF
I4794      18 57.1   -62  05 d  Pav                  F,  S,  R,  bM
I4795      18 57.2   -61  36 d  Pav                  eeF,  eS,  eE  40deg
I4798   Gx 18 58.3   -62  07 c  Pav    1.9           F,  S,  R,  bM
I4800   Gx 18 58.7   -63  08 c  Pav    1.7           vF,  S,  stell  N,  oval  ring,  2  wisps
I4799      18 58.9   -63  55 d  Pav                  vF,  S,  R,  stell  N,  ring,  2  wisps
 6742   Pl 18 59.3   +48  28 s  Dra    0.5   15.  p vF,  stellar
 6723   Gb 18 59.6   -36  38 s  Sgr   11.0    7.3   glob.  cl.  ,  vL,  vlE,  vgbM,  rrr,  st  14...16
I4801   Gx 18 59.6   -64  40 c  Pav    1.7           cF,  S,  R,  bM
 6728    - 19 00.0   -08  57 r  Aql                  Cl,  vL,  P
I4803      19 00.6   -62  04 d  Pav                  eeF,  eS,  R
 6750   Gx 19 00.7   +59  10 r  Dra                13.  p vF,  vS,  R
 6721   Gx 19 00.8   -57  47 s  Pav    1.9   12.0    pF,  cS,  R,  vmbM
 6735   OC 19 00.8   -00  28 F  Aql                  Cl,  vL,  P,  st  12...
 6740   Gx 19 00.8   +28  45 r  Lyr                15.  p eeF,  S

I4804   Gx 19 01.1   -61  50 c  Pav    1.5           eeF,  eS,  cE
I4808   Gx 19 01.1   -45  19 c  CrA    2.0           vF,  cL,  cE  45deg  ,  lbM,  susp
I4812   Nb 19 01.1   -37  04 d  CrA                  *7  inv  in  eL  neb
 6738   OC 19 01.4   +11  36 s  Aql   15.      8.  p Cl,  P,  lC
 6743    ? 19 01.4   +29  16 A  Lyr                  Cl,  pL,  P,  st  11...12
 6718   Gx 19 01.5   -66  07 c  Pav    1.5           vF,  S,  R,  glbM,  *9  sp
I4806   Gx 19 01.5   -57  32 c  Pav    2.1           eeF,  eS,  eE  10deg  ,  2  st  vnr,  susp
 6745   Gx 19 01.6   +40  45 r  Lyr                13.  p vF,  lE  ns
 6726   Nb 19 01.7   -36  53 s  CrA    2.            *6-7  in  F,  pL,  neb
 6725   Gx 19 01.8   -53  56 A  Tel                  eF,  eS,  stell  N,  with  straight  wisp  at
   40deg
 6727   Nb 19 01.8   -36  54 r  CrA                  *8  in  F,  pL  neb
I4816      19 01.8   -13  09 d  Sgr                  PN  ,  stellar
 6729   Nb 19 01.9   -36  57 s  CrA    1.            var*  (11...)  with  neb!!
I4805      19 02.0   -63  03 d  Pav                  eF,  vS,  eE  25deg  ,  bM
 6737    - 19 02.2   -18  32 r  Sgr                  Cl,  pL,  pRi,  R,  st  12...15
I4807   Gx 19 02.3   -56  56 c  Pav    0.9           vF,  vS,  lE,  PN  ?,  susp
 6741   Pl 19 02.6   -00  27 s  Aql    0.1   11.  p PN  ,  stellar
I4810   Gx 19 03.0   -56  10 c  Tel    3.0           eF,  S,  eE  140deg  ,  lbM,  susp
 6719   Gx 19 03.1   -68  35 c  Pav    1.6           vF,  pL,  R,  vgvlbM
 6722   Gx 19 03.7   -64  54 c  Pav    2.9           pF,  S,  E,  glbM,  2  st  8  p
 6748    - 19 03.8   +21  36 r  Vul                  pB,  vS,  bM
I4809      19 04.0   -62  10 d  Pav                  eF,  vS,  lE  20deg
I4814      19 05.0   -58  44 d  Pav                  eeF,  cS,  cE  100deg  ,  susp
 6749   Gb 19 05.1   +01  47 s  Aql    6.3   11.1    Cl,  L,  lC,  st  L  &  S
 6757   Gx 19 05.1   +55  43 r  Dra                14.  p pF,  mE,  3  F  st  inv
 6762   Gx 19 05.6   +63  56 r  Dra                14.  p eF,  mE;  =  6763
 6763   Gx 19 05.6   +63  56 D  Dra                14.  p eF,  vS,  cE,  F*  nr
I4811      19 05.8   -67  07 d  Pav                  eeF,  eS,  R,  alm  stell
I4813      19 05.8   -66  31 d  Pav                  vF,  S,  R
 6751   Pl 19 05.9   -06  00 s  Aql    0.3   13.  p pB,  S
I4818   Gx 19 06.0   -56  08 c  Tel    1.6           eF,  eS,  cE  90deg
 6733   Gx 19 06.2   -62  12 c  Pav    1.7           eeF,  vglbM,  v  difficult
I4817   Gx 19 06.2   -56  10 c  Tel    1.5           eF,  vS,  cE  0deg
I4815      19 06.7   -61  41 d  Pav                  cF,  vS,  R,  bM
 6759   Gx 19 06.9   +50  19 r  Dra                15.  p vF,  S,  R,  vF  D*  close  sp
I4819   Gx 19 07.1   -59  28 c  Pav    2.7           vF,  S,  eE  130deg
 6734   Gx 19 07.2   -65  28 c  Pav    1.4           vF,  S,  R,  glbM,  p  of  2
 6736   Gx 19 07.5   -65  26 c  Pav    1.2           eF,  S,  R,  glbM,  f  of  2
 6730   Gx 19 07.6   -68  55 c  Pav    1.5           vF,  S,  R,  pmbM,  *7-8  nf
 6739   Gx 19 07.8   -61  22 c  Pav    2.2           cF,  vS,  cE,  psbM,  3  st  p
 6755   OC 19 07.8   +04  14 s  Aql   15.      7.5   Cl,  vL,  vRi,  pC,  st  12...14
 6764   Gx 19 08.3   +50  56 s  Cyg    2.5   13.  p pF,  pL,  mE,  sev  vF  st  inv
 6756   OC 19 08.7   +04  41 s  Aql    4.    11.  p Cl,  S,  Ri,  lC,  st  11...12
I4820   Gx 19 09.2   -63  28 c  Pav    1.4           eeF,  eS
I4821   Gx 19 09.5   -55  01 c  Tel    1.8           vF,  vS,  eE  10deg
 6744   Gx 19 09.8   -63  51 s  Pav   15.5     9.  p cB,  cL,  R,  vg,  svmbM,  r
 6766    - 19 09.9   +46  15 r  Lyr                  PN  ,  stellar
 6746   Gx 19 10.4   -61  58 c  Pav    1.4           eF,  cS,  R,  glbM
 6752   Gb 19 10.9   -59  59 s  Pav   20.4     5.4   glob.  cl.  ,  B,  vL,  iR,  rrr,  st  11...16
 6786   Gx 19 10.9   +73  24 r  Dra                13.  p F,  S,  R,  2  st  nf
 6765   Pl 19 11.1   +30  33 s  Lyr    0.6           F,  S,  E
 6760   Gb 19 11.2   +01  02 s  Aql    6.6     9.1   pB,  pL,  vglbM
 6753   Gx 19 11.4   -57  03 s  Pav    2.5   12.  p pB,  pL,  R,  gbM
 6754   Gx 19 11.4   -50  39 s  Tel    2.2   13.  p pF,  pL,  mE  63deg  ,  vglbM
 6767    - 19 11.6   +37  43 r  Lyr                  vF,  S,  R,  stellar,  S*  nr  n
I4823      19 12.2   -64  00 d  Pav                  vF,  vS
I4826   Gx 19 12.3   -57  12 c  Pav    1.7           eF,  eeS,  R
I4829   Gx 19 12.6   -56  32 c  Tel    2.0           eeF,  eS,  mE  20deg
I4824   Gx 19 13.2   -62  05 c  Pav    2.5           eF,  eS,  Dneb
I4827   Gx 19 13.3   -60  52 c  Pav    2.5           F,  cS,  eE  170deg  ,  stell  N
I4828      19 13.6   -62  04 d  Pav                  vF,  vS,  cE  60deg
I4830   Gx 19 13.8   -59  18 c  Pav    1.7           eF,  eS,  R,  lbM
 6758   Gx 19 13.9   -56  19 s  Tel    2.1   13.  p pB,  S,  R
I4832   Gx 19 14.1   -56  37 c  Tel    2.0           vF,  vS,  eE  145deg  ,  stell  N
 6772   Pl 19 14.6   -02  42 s  Aql    1.0   14.  p vF,  L,  R,  vvlbM,  r
I4831   Gx 19 14.7   -62  16 c  Pav    3.3           !  cF,  vS,  eE  150deg  ,  2-br  spir
I4822      19 14.9   -72  26 d  Pav                  F,  S,  R
 6773    - 19 15.0   +04  53 r  Aql                  Cl,  P,  lC
 6761   Gx 19 15.3   -50  40 v  Tel    2.2           vF,  pS,  iR
I4837   Gx 19 15.3   -54  40 s  Tel    2.8   12.  p F,  cS,  R,  bM
I4835      19 15.5   -58  14 d  Pav                  eF,  eS,  cE  0deg
I4833      19 15.6   -62  20 d  Pav                  eeF,  eS,  R,  bM
I4839   Gx 19 15.6   -54  38 c  Tel    2.4           F,  neb*
I4840   Gx 19 15.9   -56  13 c  Tel    1.1           cF,  vS
 6787   Gx 19 16.3   +60  25 r  Dra                15.  p eeF,  pS,  4  st  sf,  e  diffic
I4836   Gx 19 16.3   -60  12 c  Pav    1.1           F,  cL,  iF,  2  st  inv
 6768   Gx 19 16.5   -40  11 r  CrA                  vF,  S,  R,  psbM
I4834      19 16.5   -64  01 d  Pav                  eF,  vS,  lE  140deg
I4846   Pl 19 16.5   -09  03 s  Aql                13.  p PN  ,  stellar
 6774   OC 19 16.6   -16  16 r  Sgr                  Cl,  vL,  lC
 6779   Gb 19 16.6   +30  11 s  Lyr    7.1     8.3   glob.  cl.  ,  B,  L,  iR,  gvmCM,  rrr,  st
   11...14;  =  M5
 6783   Gx 19 16.6   +46  01 r  Cyg                15.  p eF,  diffic
 6789   Gx 19 16.7   +64  00 r  Dra                13.  p eeF,  pL,  R,  v  diffic
 6775  Ast 19 16.8   -00  55 F  Aql                  Cl,  P,  lC,  st  10...11
I4838      19 16.8   -61  37 d  Pav                  cF,  S,  eE  45deg
I4825      19 17.3   -72  45 d  Pav                  eF,  eS,  R
I1297   Pl 19 17.4   -39  37 s  CrA    0.1           stellar  (gaseous  spectrum)
 6769   Gx 19 18.4   -60  31 s  Pav    2.5   11.8    vF,  S,  R,  lbM,  1st  of  3
 6778   Pl 19 18.4   -01  36 s  Aql    0.3   13.  p S,  E,  ill-defined  disc
 6781   Pl 19 18.4   +06  33 s  Aql    1.8   12.  p PN  ,  F,  L,  R,  vsbM  disc,  S*  nf
I1298   OC 19 18.5   -01  37 x  Aql                  vS  Cl,  6778  p  3'
 6770   Gx 19 18.7   -60  31 s  Pav    2.5   12.0    eF,  vS,  2nd  of  3
 6771   Gx 19 18.7   -60  33 s  Pav    2.6   12.5    eF,  S,  3rd  of  3
I4844   Gx 19 19.0   -56  02 c  Tel    1.6           vF,  vS
I4843      19 19.3   -59  18 d  Pav                  eF,  eS,  cE  90deg
I4842   Gx 19 19.5   -60  39 s  Pav    2.4   12.3    vF,  vS,  R
I4845   Gx 19 20.4   -60  23 c  Pav    1.7           cF,  bM,  *11  sp  0'.4
I4850      19 20.4   -00  08 d  Aql                  PN  ,  stellar
 6791   OC 19 20.7   +37  51 s  Lyr   16.      9.5   vF
I4841      19 20.8   -72  13 d  Pav                  eF,  S,  R,  cbM
 6785      19 20.9   -01  06 D  Aql                  eS,  stellar
 6792   Gx 19 21.0   +43  08 r  Lyr                13.  p F,  E  26deg  ,  glbM,  *9.5  sf
 6796   Gx 19 21.5   +61  09 s  Dra    2.1   14.  p vF,  pS,  mE  ns
I1299   OC 19 22.6   +20  45 x  Vul                  S  Cl  of  vF  st
I4848      19 22.8   -56  47 d  Pav                  eF,  eS,  R
 6780   Gx 19 22.9   -55  47 s  Tel    1.9   13.  p vF,  L,  R,  vglbM
 6790   Pl 19 23.2   +01  31 s  Aql    0.1   10.  p PN  ,  B,  eS,  stell  =  9.5  mag
 6793   OC 19 23.2   +22  11 r  Vul                  Cl,  P,  lC
I4847      19 23.5   -65  31 d  Pav                  vF,  eS,  R,  *8.9  sf  4'
 6782   Gx 19 24.0   -59  55 s  Pav    2.7   13.  p cF,  cS,  R,  lbM,  *9  s
 6798   Gx 19 24.0   +53  38 r  Cyg                14.  p F,  vS,  R,  *  vnr
I1300    ? 19 24.1   +52  39 x  Cyg                  =  6798
 6776   Gx 19 25.4   -63  52 s  Pav    1.9   12.0    pB,  S,  R,  pgbM
I4849      19 25.4   -62  54 d  Pav                  vF,  vS
I4851   Gx 19 25.5   -57  40 c  Pav    1.6           vF,  vS,  eE  15deg  ,  vmbM,  susp
 6795    - 19 26.1   +03  31 r  Aql                  Cl,  Ri,  bet  2  st  9
I4852   Gx 19 26.4   -60  20 c  Pav    1.7           cF,  bM
I4867   Gx 19 26.5   +50  07 u  Cyg    1.0   14.  p S;  2  st  7  nf  3'  (=  IC  1301?)
 6784   Gx 19 26.6   -65  37 c  Pav    0.8           eeeF,  pS,  am  S  st
I1301   Gx 19 26.6   +49  45 v  Cyg    1.4           eeF,  vS,  R,  3  st  f;  =  IC  4867?
 6777      19 26.8   -71  30 D  Pav                  2  st  8  or  9  mag  nr  (no  neb)
 6788      19 26.9   -54  57 D  Tel                  pB,  S,  mE,  pslbM
 6800   OC 19 27.2   +25  08 s  Vul                  Cl,  vL,  pRi,  vlC,  st  10...
I4854      19 27.4   -59  18 d  Pav                  vF,  cS,  R
I4855      19 27.5   -59  18 d  Pav                  eF,  vS,  R,  susp
I4856   Gx 19 27.5   -54  55 c  Tel    1.0           eF,  eS,  Dneb,  susp
 6801   Gx 19 27.7   +54  22 r  Cyg                15.  p eF,  pS,  R,  F*  s  nr
 6794   Gx 19 27.9   -38  53 r  Sgr                  eF,  pS,  R,  vgvlbM
I4863      19 28.3   -36  12 d  Sgr                  close  D*,  nebulous?
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I4857   Gx 19  28.6   -58  46  c   Pav     1.8          vF,  cS,  R; = IC 4858
I4858   Gx 19  28.6   -58  46  c   Pav     1.8          eeF, eS,  prob spir;  susp
 6797    - 19  28.9   -25  40  r   Sgr                  neb  with *9 att f; nonexistent?
I4861      19  29.2   -57  34  d   Pav                  vF,  eS,  cE  25deg  , susp
 6802   OC 19  30.6   +20  16  s   Vul     3.     8.8   Cl,  L,  vC,  E  0deg  , st  14...18
I4859      19  30.8   -66  19  d   Pav                  eF,  S,  cbM,  alm  stell  N
I1302   Gx 19  30.9   +35  47  s   Cyg     1.0   13.3   vF,  undefined
I4853      19  30.9   -71  04  d   Pav                  eeF, eS,  lE  170deg
I4865      19  30.9   -46  42  d   Tel                  F,  perh  stell  N;  *9.5  att  sf
 6803   Pl 19  31.3   +10  03  s   Aql     0.1   11.  p PN  , stellar
I1303   Gx 19  31.5   +35  53  v   Cyg     1.5   14.2   vF,  S,  with  S  Cl
I4860   Gx 19  31.5   -67  22  c   Pav     1.1          eF,  S,  R
 6804   Pl 19  31.6   +09  13  s   Aql     1.1   12.  p cB,  S,  iR,  rrr
I4862   Gx 19  31.7   -67  19  c   Pav     1.4          eF,  S,  cbM,  lE  0deg
 6799   Gx 19  32.3   -55  54  c   Tel     1.5          eF,  vS,  R,  lbM,  3  vS  st  nr
I4868      19  33.5   -45  54  d   Tel                  eS,  lE,  mag  9.4
 6807   Pl 19  34.6   +05  41  s   Aql            14.  p PN  , stellar
I4866   Gx 19  34.6   -61  09  c   Pav     1.6          cF,  S,  R,  bM
I4873      19  34.9   -46  08  d   Tel                  F,  S,  R,  F*  M
I1304      19  35.5   +41  02  d   Cyg                  F  neby
I4871   Gx 19  35.7   -57  31  c   Pav     3.2          vF,  S,  eE  15deg
I4872   Gx 19  35.7   -57  31  c   Pav     3.2          vF,  S,  eE  5deg  ; = IC  4871
I4869   Gx 19  36.0   -61  02  c   Pav     2.3          F,  S,  R,  bM,  F*  sp  1'
I4874   Gx 19  36.4   -47  16  c   Tel     1.4          F,  S,  R,  F*  M
 6805   Gx 19  36.8   -37  33  c   Sgr     1.2          eF,  R,  vgbM
 6806   Gx 19  37.2   -42  19  v   Sgr                  eF,  vS,  *14  att
 6817   Gx 19  37.4   +62  22  r   Dra            15.  p eeF, pS,  lE
I4870   Gx 19  37.6   -65  49  c   Pav     1.5          vF,  S,  F*  inv
I4875   Gx 19  37.7   -52  04  c   Tel     1.3          F,  S,  R,  lbM
I4876   Gx 19  37.7   -52  51  c   Tel     1.2          F,  S,  R,  lbM
I4877   Gx 19  37.9   -51  59  c   Tel     1.1          F,  S,  R,  lbM
 6811   OC 19  38.2   +46  34  s   Cyg    13.     6.8   Cl,  L,  pRi,  lC,  st  11..14
I4878      19  38.8   -58  13  d   Pav                  eF,  eS,  mE  40deg
I1305      19  39.3   +20  13  d   Vul                  vF,  *9.5  at  sf  end
I4879      19  39.7   -52  22  d   Tel                  F,  S,  R,  lbM
 6809   Gb 19  40.0   -30  58  s   Sgr    19.0    7.0   glob.  cl.  ,  pB,  L,  R,  vRi,  vgbM,  st
   12...15;  = M55
I4864   Gx 19  40.1   -77  33  c   Oct     1.6          eF,  vS,  eE  70deg  , vF*  sp  1'
 6813   Nb 19  40.4   +27  18  s   Vul     3.           **  in  vF,  S  neb
I4881   Gx 19  40.4   -55  51  c   Tel     1.5          eF,  vS,  R
I4882   Gx 19  40.4   -55  12  c   Tel     1.2          eF,  eS,  R
I4880   Gx 19  40.5   -56  25  c   Tel     1.5          eF,  vS,  R
 6815   OC 19  40.9   +26  51  r   Vul                  Cl,  vL,  pRi,  lC,  st  10...15
 6819   OC 19  41.3   +40  11  s   Cyg     5.     7.3   Cl,  vL,  vRi,  st  11...15
 6825   Gx 19  41.7   +64  05  r   Dra            15.  p eF,  vS,  v  diffic,  F*  nr
I1306    ? 19  41.7   +37  39  x   Cyg                  neb  group  of  F  st
I4883   Gx 19  42.0   -55  33  c   Tel     1.3          vF,  vS,  mE  170deg
 6814   Gx 19  42.7   -10  19  s   Aql     3.2   11.2   pF,  pL,  R,  bM,  r
I4884      19  42.7   -58  07  d   Pav                  eF,  eS,  cE  170deg
I1307    ? 19  42.8   +27  30  x   Vul                  F,  vL,  E  ns,  st  inv
 6820   Nb 19  43.1   +23  17  s   Vul    40.           F,  S,  R,  bM
 6823   OC 19  43.1   +23  18  s   Vul    12.     7.1   Cl,  cRi,  E,  st  11...12
I4886   Gx 19  43.1   -51  48  c   Tel     1.5          F,  S,  R,  mbM
 6810   Gx 19  43.6   -58  40  s   Pav     3.8   12.  p cF,  S,  eE  170deg  , stell  N
 6824   Gx 19  43.7   +56  07  s   Cyg     2.1   11.9   pB,  iF,  bM
 6808   Gx 19  43.9   -70  39  s   Pav     1.7   13.  p pB,  E,  biN,  *8  f
I4885   Gx 19  43.9   -60  39  c   Pav     2.0          vF,  eS,  eE  85deg  , stell  N
 6816      19  44.0   -28  33  D   Sgr                  eF,  pS,  R,  vlbM,  *14  at  pos  20deg  , dist
   30"
 6818   Pl 19  44.0   -14  09  s   Sgr     0.3   10.  p PN  , B,  vS,  R
 6821   Gx 19  44.4   -06  50  s   Aql     1.1   14.  p F,  pL,  R
 6826   Pl 19  44.8   +50  31  s   Cyg     2.3   10.  p PN  , B,  pL,  R,  *11  M
 6822   Gx 19  44.9   -14  48  s   Sgr    10.2    9.  p vF,  vS,  E,  dif;  = IC  4895
I4888   Gx 19  44.9   -54  27  c   Tel     1.3          F,  vS,  R,  lbM
I4895   Gx 19  45.0   -14  48  m   Sgr    10.0    8.  p group  of  neb,  25'  diam;  = 6822
I1308      19  45.1   -14  43  d   Sgr                  eF,  eS,  lE,  gbM,  6822  p  12s
I4889   Gx 19  45.3   -54  20  s   Tel     2.6   12.  p bM,  mag  10
I4891   Gx 19  45.3   -54  21  c   Tel     2.8          cB,  S,  R,  bM;  = IC  4889
 6812   Gx 19  45.4   -55  21  c   Tel     2.1          pB,  pS,  pmE,  glbM
I4890   Gx 19  45.6   -56  33  c   Tel     1.3          eeF, eS,  R,  F*  s  1'
I4894   Gx 19  47.0   -51  51  c   Tel     0.9          bM,  mag  15
 6829   Gx 19  47.1   +59  55  r   Dra            15.  p eF,  pS,  R,  pB*  close  s,  p  of  2
I4898      19  47.8   -33  19  d   Sgr                  eeF, eS,  e  dif,  sev  F  st  nr
 6831   Gx 19  47.9   +59  54  r   Dra            14.  p eF,  S,  R,  f  of  2
 6832    - 19  48.1   +59  25  r   Dra                  Cl,  vL,  lC,  st  7...
I4887      19  48.3   -69  35  d   Pav                  cB,  S,  R,  bM
 6827   OC 19  48.9   +21  13  r   Vul                  vF,  E,  dif,  sev  st  inv
I4896      19  49.1   -58  59  d   Pav                  eeF, eS,  R,  bet  2  eF  st
I4897   Gx 19  49.3   -51  52  c   Tel     1.1          bM,  mag  16
I4892   Gx 19  49.5   -70  14  c   Pav     1.6          eF,  S,  eE  10deg
 6833   Pl 19  49.7   +48  58  s   Cyg<    0.1   14.  p PN  , stellar
I4900      19  50.3   -51  20  d   Tel                  bM,  mag  15
 6828    - 19  50.4   +07  55  r   Aql                  Cl,  P,  lC
I4893      19  50.6   -72  31  d   Pav                  eF,  vS,  R,  bM
 6830   OC 19  51.0   +23  04  s   Vul    12.     7.9   Cl,  L,  pRi,  pC,  st  11...12
 6834   OC 19  52.2   +29  25  s   Cyg     5.     7.8   Cl,  P,  lC,  st  11...12
 6837   OC 19  53.5   +11  41  A   Aql                  Cl,  S,  P
 6838   Gb 19  53.8   +18  47  s   Sge     7.2    8.3   Cl,  vL,  vRi,  pmC,  st  11...16;  = M71
I4899      19  54.4   -70  36  d   Pav                  eeF, eS,  vF*  sp  1'
I4901   Gx 19  54.4   -58  43  c   Pav     5.0          cF,  S,  vlE  135deg
I4902      19  54.4   -56  23  d   Tel                  eeF, eS,  cE  0deg  ; susp
 6835   Gx 19  54.5   -12  34  s   Sgr     2.7   12.5   F,  pL,  mE
 6839    - 19  54.5   +17  54  r   Sge                  Cl,  vS,  vC
 6836   Gx 19  54.7   -12  41  s   Sgr     1.2   13.  p vF,  pL,  R,  dif,  *13.5  att  f
 6842   Pl 19  55.0   +29  17  s   Vul     0.8   14.  p F,  pL,  vlE
 6840   OC 19  55.3   +12  06  A   Aql                  Cl,  P,  lC
 6843   OC 19  56.1   +12  09  A   Aql                  Cl,  S,  P
I4905      19  56.1   -61  13  d   Pav                  eeF, eS,  mE  130deg  , nr  2  eF  st
I4907      19  56.2   -52  27  d   Tel                  bM,  mag  16
 6846   OC 19  56.5   +30  21  r   Cyg            14.  p eF,  vS,  3  st  inv
I4909   Gx 19  56.7   -50  03  c   Tel     2.1          bM,  mag  15
I4906   Gx 19  56.8   -60  28  c   Pav     1.7          F,  S,  R,  bM,  4  st  around
I4913   Gx 19  56.8   -37  20  c   Sgr     1.9          eeF, pS,  e  diffic,  3  st  10  s  8'
I4908      19  56.9   -55  47  d   Tel                  eF,  eS,  R,  susp
 6847    - 19  57.0   +29  20  r   Vul                  neb,  r
I4911      19  57.7   -51  58  d   Tel                  bM,  mag  16
 6841   Gx 19  57.8   -31  49  c   Sgr     1.5          vF,  S,  R,  psbM
I4910      19  57.8   -56  52  d   Pav                  eF,  eS,  cE  130deg  , am  st;  susp
I4914      19  58.1   -50  07  d   Tel                  F,  vS,  R
I4903      19  58.2   -70  27  d   Pav                  eF,  vS,  bet  2  F  st
I4916   Gx 19  58.3   -50  16  c   Tel     1.3          F,  S,  R,  F*  M
I4904      19  58.5   -70  11  d   Pav                  vF,  S,  R
I4915   Gx 19  58.5   -52  38  c   Tel     1.4          bM,  mag  15
I4917   Gx 19  58.9   -52  16  c   Tel     1.2          bM,  mag  16
 6856    - 19  59.3   +56  08  r   Cyg                  Cl,  pS,  pmC,  iR,  st  12...16
I4918      19  59.3   -52  17  d   Tel                  bM,  mag  16
I4922      19  59.5   -40  22  d   Sgr                  vF,  vS,  R;  susp
 6853   Pl 19  59.6   +22  43  s   Vul    15.2    8.1   !!!,  vB,  vL,  biN,  iE  (Dumbbell);  = M27
I4924      19  59.9   -41  33  d   Sgr                  dif  (defect?)
I4920      20  00.1   -53  23  d   Tel                  vF,  vLE,  lbM
I4919   Gx 20  00.2   -55  22  c   Tel     1.6          eeF, eS,  R,  * f  1';  susp
I4926      20  00.2   -38  35  d   Sgr                  eeF, S,  lE,  v  diffic,  p  of  2
 6852   Pl 20  00.6   +01  43  s   Aql     0.5          F  neb,  am  st
 6869   Gx 20  00.7   +66  13  s   Dra     1.7   13.  p pB,  pS,  R
I4931   Gx 20  00.8   -38  35  c   Sgr     2.6          eeF, pS,  R,  *8  f  20s  , f  of  2
 6845   Gx 20  00.9   -47  05  r   Tel                  vF,  S,  vlE,  glbM
I4923   Gx 20  01.0   -52  38  c   Tel     1.3          bM,  mag  14
I4925      20  01.2   -52  51  d   Tel                  F,  S,  vME  170deg
 6849      20  01.3   -40  13  d   Sgr                  pB,  S,  R,  vS*  np
I4927   Gx 20  01.8   -53  55  c   Tel     1.3          F,  S,  E  170deg
 6857   Pl 20  01.9   +33  31  r   Cyg                  F,  am  Milky  Way  st

I4932      20  02.3   -52  50  d   Tel                  bM,  mag  15
I4930      20  02.4   -54  18  d   Tel                  cB,  S,  mE  45deg  , susp
 6844   Gx 20  02.8   -65  14  c   Pav     1.6          eF,  vS,  R,  psbM,  *11  np
 6848   Gx 20  02.8   -56  05  c   Tel     2.5          cF,  cL,  R,  vglbM,  2  st  f
 6858    - 20  03.1   +11  16  r   Aql                  Cl,  cL,  E,  pRi,  st  13...
I1309   Gx 20  03.1   -17  14  c   Sgr     2.0          F,  vS,  R,  r
I4921      20  03.3   -67  50  d   Pav                  vF,  S,  R;  cbM
 6850   Gx 20  03.5   -54  51  v   Tel                  vF,  S,  R,  bM
I4933   Gx 20  03.5   -54  59  c   Tel     2.5          eF,  eS,  2-branch  spir
 6851   Gx 20  03.6   -48  17  s   Tel     1.8   13.  p pF,  S,  vlE,  psbM
 6866   OC 20  03.7   +44  00  s   Cyg     7.     7.6   Cl,  L,  vRi,  cC
 6859   *** 20  03.9   +00  26  F   Aql                  vS  Cl,  *10  p  1s  , s  1'  29"
I4935   Gx 20  04.6   -57  36  c   Pav     1.5          vF,  vS,  mE  5deg  , *  1'  sp;  susp
I4954   Nb 20  04.8   +29  15  s   Vul    25.           D  neb*,  iF,  *11  close
I4955      20  04.9   +29  11  d   Vul                  fine  neb  *12
 6863  Ast 20  05.1   -03  34  F   Aql                  Cl,  S,  vmC,  st  19
I4937   Gx 20  05.3   -56  15  c   Tel     2.0          eF,  vS,  eE  0deg  , N;  susp
 6854   Gx 20  05.7   -54  23  s   Tel     2.3   13.  p F,  S,  vlE,  glbM
I4940      20  05.7   -44  42  d   Sgr                  F,  S,  E  100deg
 6871   OC 20  05.9   +35  47  s   Cyg    20.     5.2   Cl,  st  L  and  S,  **  inv
I4936   Gx 20  05.9   -61  26  c   Pav     1.6          eF,  vS,  eE  20deg  , 2  F  st  np
 6865   Gx 20  06.0   -09  02  r   Aql                  F,  S,  E
I4946      20  06.0   -44  02  d   Sgr                  eF,  S,  R
 6864   Gb 20  06.1   -21  55  s   Sgr     6.0    8.6   glob.  cl.  ,  B,  pL,  R,  vmbMBN,  rr;  = M75
I4938   Gx 20  06.2   -60  13  c   Pav     1.9          !  vF,  pS,  annul,  stell  N,  vF*  sf
I4943   Gx 20  06.5   -48  22  c   Tel     2.2          eeF,  pS,  R,  F*  n,  v  diffic
I4948      20  06.5   -43  37  d   Sgr                  vF,  pS,  R,  2  st  f,  *  np
I4929   Gx 20  06.7   -71  41  c   Pav     1.3          F,  S,  cE  15deg
 6855   Gx 20  06.8   -56  24  r   Tel                  pF,  S,  R
I4912   Gx 20  06.8   -77  21  c   Oct     1.0          eF,  vS,  F*  np  1';  susp
I4942   Gx 20  06.8   -52  37  c   Tel     1.3          F,  vS,  R
I4941   Gx 20  07.0   -53  39  c   Tel     1.2          F,  S,  R,  lbM,  v  dif
I4944   Gx 20  07.1   -54  27  c   Tel     1.9          bM,  mag  14
I4934      20  07.2   -69  28  d   Pav                  vF,  vS,  cE  15deg  , lbM;  susp
I4939      20  07.2   -60  44  d   Pav                  eeF,  eS,  cE  150deg  , F*  s  2'
 6861   Gx 20  07.3   -48  22  s   Tel     2.7   11.1   B,  S,  cE,  gpmbM
I4949   Gx 20  07.3   -48  22  c   Tel     3.0          B,  vS,  cE;  = 6861
I4947   Gx 20  07.5   -53  08  c   Tel     1.2          bM,  mag  15
 6874    - 20  07.8   +38  14  r   Cyg                  Cl,  P,  lC
 6873   D* 20  08.3   +21  06  r   Sge                  Cl,  lC,  st  10...13,  **  inv
I4950   Gx 20  08.4   -56  10  c   Tel     1.3          eF,  vS,  eE  35deg  , lbM
I4952   Gx 20  08.6   -55  27  c   Tel     1.3          F,  vS,  cE  10deg
 6860   Gx 20  08.8   -61  06  c   Pav     1.6          F,  pS,  gbM
 6862   Gx 20  08.9   -56  24  c   Tel     1.9          F,  S,  lE,  glbM
I4951   Gx 20  09.5   -61  51  c   Pav     2.8          vF,  vS,  eE  170deg  , vmbM
I4957   Gx 20  09.6   -55  43  c   Tel     1.0          bM,  mag  14
 6868   Gx 20  09.9   -48  23  s   Tel     2.7   12.  p vB,  S,  R,  pgvmbM
I1310      20  10.0   +34  58  d   Cyg                  F  neby
I4953      20  10.1   -62  48  d   Pav                  eF,  eS,  cE  60deg  , bet  2  eF  st
 6870   Gx 20  10.2   -48  17  s   Tel     2.5   12.2   cF,  cS,  E  90deg  , gbM
I4928      20  10.2   -77  18  d   Oct                  eF,  vS,  eE  25deg  , eF*  n  1';  susp
I1311  C+N 20  10.3   +41  13  s   Cyg    60.    13.  p eF,  within  circle  of  st
 6867   Gx 20  10.4   -54  47  r   Tel                  eeF,  L,  pmE
 6884   Pl 20  10.4   +46  28  s   Cyg     0.1   13.  p PN  , stellar
 6879   Pl 20  10.5   +16  55  s   Sge     0.1   13.  p PN  , stellar  = 10m
 6881   Pl 20  10.8   +37  25  s   Cyg     0.1   14.  p PN  , stellar
I4959      20  11.0   -53  06  d   Tel                  hazy  star
 6883   OC 20  11.3   +35  51  s   Cyg    15.     8.  p Cl,  pRi,  **  inv
I4945   Gx 20  11.3   -71  01  c   Pav     1.0          F,  S,  E  5deg  , cbM
I4956   Gx 20  11.5   -45  36  c   Tel     1.9          vF,  pS,  R
I4961   Gx 20  11.5   -53  08  c   Tel     1.4          F,  pS,  mE  90deg  , dif
 6882   OC 20  11.7   +26  33  s   Vul    18.     8.1   Cl,  P,  lC
I4977      20  11.9   -21  38  d   Cap                  stellar,  close  to  *13
 6885   OC 20  12.0   +26  29  s   Vul     7.     6.  p Cl,  vB,  vL,  Ri,  lC,  st  6...11
 6888   Nb 20  12.0   +38  21  s   Cyg    20.           F,  vL,  vmE,  **  att
I4963   Gx 20  12.1   -55  15  c   Tel     2.0          vF,  vS,  R
I4966      20  12.3   -53  36  d   Tel                  F,  vS,  E  40deg
I4965   Gx 20  12.5   -56  50  c   Pav     1.5          bM,  mag  15
 6886   Pl 20  12.7   +19  59  s   Sge     0.1   12.  p PN  , stellar  = 10m
I4969   Gx 20  12.9   -53  55  c   Tel     1.0          F,  vS,  R
 6875   Gx 20  13.2   -46  09  s   Tel     2.5   13.  p F,  vS,  R,  vgmbM,  *7  sp  3'
 6878   Gx 20  13.9   -44  31  s   Sgr     1.7   13.4   vF,  pL,  R,  glbM
I4975   Gx 20  14.0   -52  43  c   Tel     1.3          bM,  mag  15
I4968      20  14.6   -64  47  d   Pav                  vF,  S,  B*  sf  3'
I4973      20  14.6   -58  22  d   Pav                  eeF,  vS,  R
I4978      20  14.6   -54  26  d   Tel                  bM,  mag  15
I4979   Gx 20  14.7   -53  28  c   Tel     1.3          vF,  S,  R,  dif
 6891   Pl 20  15.2   +12  42  s   Del     1.2   12.  p PN  , stellar  = 9.5m
I4974      20  15.3   -61  52  d   Pav                  eF,  eS,  R,  bM,  *  sp  1'
I4960   Gx 20  15.4   -70  32  c   Pav     1.0          eF,  eS,  bM
I4958      20  15.5   -72  42  d   Pav                  eF,  bM
I4976      20  15.5   -61  53  d   Pav                  eF,  eS,  R,  bM,  *  3'  np
I4980   Gx 20  15.5   -57  55  c   Pav     1.6          vF,  S,  lE  130deg  , *  2'  s
I4962      20  15.9   -71  00  d   Pav                  F,  S,  eE  160deg  , vmbM
I4983   Gx 20  16.1   -52  05  c   Tel     1.1          vF,  cS,  R,  lbM,  dif
I4984      20  16.3   -52  43  d   Tel                  vF,  S,  R,  dif,  6887  f
 6894   Pl 20  16.4   +30  34  s   Cyg     0.7   14.  p !!,  ring  , F,  S,  vvlE
 6895    - 20  16.4   +50  14  r   Cyg                  Cl,  pRi,  lC
I4967   Gx 20  16.4   -70  34  c   Pav     0.6          vF,  bM
I4996   OC 20  16.5   +37  38  s   Cyg     6.     7.3   Cl,  st  8...13
 6892    - 20  16.8   +18  02  r   Sge                  eF  neb*  (eS  Cl?);  = IC  1312?
I1312      20  16.8   +18  01  x   Sge                  eF,  pL,  dif;  = 6892
 6872   Gx 20  16.9   -70  46  s   Pav     4.7   11.6   F,  pS,  lE,  glbM,  *9  p  10s  .5,  1st  of  4
I4970   Gx 20  16.9   -70  45  s   Pav     0.8   13.9   bM,  nr  6872
I4971      20  17.0   -70  38  d   Pav                  eF,  vS
 6887   Gx 20  17.2   -52  47  s   Tel     4.1   12.  p pF,  cL,  pmE,  glbM
I4986   Gx 20  17.2   -55  02  c   Tel     2.0          eeF,  S,  cE  0deg  , bet  2  F  st
I4987   Gx 20  17.3   -52  17  c   Tel     1.4          F,  vS,  R,  lbM
I1315      20  17.4   +30  41  d   Cyg                  *13  with  eF  neb?
I4964   Gx 20  17.4   -73  53  c   Pav     1.3          F,  S,  cbM
I1314      20  17.7   +25  11  d   Vul                  F,  pL,  partly  resolved
I4972   Gx 20  17.7   -70  55  c   Pav     1.0          eF,  vS,  eE  15deg
 6896    - 20  18.0   +30  39  r   Cyg                  Cl  (+  neb?),  S,  st  vS
 6876   Gx 20  18.3   -70  52  s   Pav     2.4   13.  p pB,  S,  R,  eS*  sf,  2nd  of  4
 6890   Gx 20  18.3   -44  48  s   Sgr     1.5   12.5   pF,  S,  R,  vglbM
I4991   Gx 20  18.4   -41  03  c   Sgr     2.5          vF,  cS,  R
 6877   Gx 20  18.6   -70  51  s   Pav     1.4   12.7   vF,  vS,  R,  3rd  of  4
I1313   Gx 20  18.7   -16  57  c   Cap     2.6          F,  vS,  R,  *13  close
 6889   Gx 20  18.9   -53  57  c   Tel     1.9          vF,  L,  lE
 6880   Gx 20  19.5   -70  52  s   Pav     2.1          F,  S,  R,  r,  vS*  att,  4th  of  4
I4989      20  19.5   -58  33  d   Pav                  cS,  mE  175deg  , spir,  F*  M
 6911   Gx 20  19.6   +66  45  r   Dra            15.  p eF,  L,  lbM,  pB*  nr
I4981   Gx 20  19.7   -70  51  c   Pav     0.7          eF,  eS,  *  nr
I4994   Gx 20  19.7   -53  27  c   Tel     2.0          bM,  mag  15
I4995   Gx 20  20.0   -52  37  c   Tel     1.7          bM,  mag  14
I4997   Pl 20  20.2   +16  45  s   Sge<    0.1   12.  p PN  , stellar
I4982      20  20.4   -71  00  d   Pav                  vF,  bM
I4985      20  20.7   -70  59  d   Pav                  vF,  bM
 6893   Gx 20  20.8   -48  14  s   Tel     2.8   13.  p pF,  S,  R,  sbM  *12
 6897   Gx 20  21.0   -12  16  r   Cap            15.  p vF,  S
 6898   Gx 20  21.2   -12  21  r   Cap            14.  p F,  S,  iR
I4990      20  21.5   -66  54  d   Pav                  eF,  eS,  cE  15deg  , bM,  susp
 6900   Gx 20  21.6   -02  34  r   Aql            14.  p vF,  S,  R
 6904    - 20  21.8   +25  45  r   Vul                  Cl,  S,  vlC,  st  10...11
I4988      20  21.8   -69  23  d   Pav                  hazy  patch,  st?;  susp
I4993      20  22.0   -67  00  d   Pav                  eF,  vS,  R,  bM,  susp
I1318      20  22.2   +40  15  d   Cyg   240.           gamma  Cyg,  surr  by  L  patches  of  F  neby
I4998   Gx 20  22.2   -38  18  c   Sgr     1.7          eF,  pS,  R,  bet  2  st  8.5  sp,  nf
I5018   Gx 20  22.2   -38  18  c   Sgr     1.7          eF,  pS,  R,  bet  2  st  8.5  sp,  nf;  = IC  4998
 6901   Gx 20  22.3   +06  27  r   Aql            15.  p eF;  = IC  5000,  IC  1316
 6905   Pl 20  22.4   +20  07  s   Del     1.7   12.  p !!,  PN  , B,  pS,  R,  4  S  st  nr
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I1316      20 22.4   +06  32 x  Aql                eF,  neb,  suspected;  = IC 5000
I5000   Gx 20 22.4   +06  26 v  Aql    1.5         pS,  eF st inv
 6910   OC 20 23.1   +40  47 s  Cyg    8.     7.4  Cl,  pB,  pS,  P,  pC,  st 10...12
I1317   Gx 20 23.3   +00  40 s  Aql    0.9   13.4  plan  = *12,  diam  10"- 15"
 6916   Gx 20 23.5   +58  22 r  Cyg          15.  p eeF,  pS,  F* close  p,  v diffic
I4992   Gx 20 23.5   -71  34 c  Pav    2.0         vF,  S,  eE  65deg  , *9  nf  2'
 6903   Gx 20 23.6   -19  19 r  Cap          13.  p Cl,  E,  bM  *17,  *10  att  n
 6906   Gx 20 23.6   +06  27 s  Aql    1.8   12.7  pF,  pL,  R
I5006   Gx 20 23.7   +06  27 m  Aql    1.6   12.  p *14  in  F,  vS,  R  neb
 6913   OC 20 23.9   +38  32 s  Cyg    7.     6.6  Cl,  P,  lC,  st  L  and  S;  = M29
I4999   Gx 20 23.9   -26  01 c  Cap    1.9         vF,  pL,  R,  am  st
 6899   Gx 20 24.4   -50  26 c  Tel    1.9         F,  S,  R,  glbN,  am  st
 6902   Gx 20 24.5   -43  39 s  Sgr    2.2   13.  p F,  cS,  R,  bM
 6914   Nb 20 24.7   +42  29 s  Cyg   13.          vF,  vL,  iR,  dif,  2  st  att  p
 6907   Gx 20 25.1   -24  49 s  Cap    3.4   11.3  cF,  cL,  vlE,  vglbM,  r,  3  st  p
 6908    - 20 25.2   -24  48 r  Cap                eF,  vS,  lE,  6907  p
I5003      20 25.2   -29  52 d  Sgr                vF,  cS,  R,  2  st  sf  in  line
I5005   Gx 20 25.3   -25  50 c  Cap    2.3         pS,  R,  vgbM,  F*  close  np
I5004      20 25.4   -30  52 d  Sgr                eF,  pS,  lE,  2  st  s
I5007      20 25.6   -29  42 d  Sgr                eeF,  cL,  R
I1319   Gx 20 26.0   -18  31 m  Cap    0.6   14.  p pF,  vS,  R,  r
I5001   Gx 20 26.3   -54  47 c  Tel    1.3         bM,  mag  15
I1320   Gx 20 26.4   +02  55 u  Del    1.0   14.  p pF,  S,  R,  gbM,  r
I5002   Gx 20 26.7   -54  48 c  Tel    1.6         bM,  mag  13
 6912   Gx 20 26.9   -18  38 s  Cap    1.6   14.  p vF,  2  st  14- 15  np,  *8  f
 6917   Gx 20 27.4   +08  06 r  Del          14.  p vF,  S,  att  to  a  S*
 6909   Gx 20 27.7   -47  02 s  Tel    2.3   13.  p pB,  pL,  gbM,  2  st  10  nr
 6915   Gx 20 27.8   -03  05 v  Aql    1.2         pB,  S,  R
I1321   Gx 20 28.2   -18  18 m  Cap    0.6   15.  p F,  S,  iF,  r
 6921   Gx 20 28.5   +25  43 s  Vul    1.1   15.  p F,  S,  E
I5011   Gx 20 28.6   -36  02 c  Mic    2.2         pB,  vS,  vmE
I5013   Gx 20 28.6   -36  02 c  Mic    2.2         eS,  vmE  ns;  = IC  5011
I5015      20 28.6   -31  42 d  Mic                pB,  pS,  R,  nearly  bet  2  st
I5012   Gx 20 29.5   -56  45 c  Pav    1.4         pS,  E  225deg  ,  lbM
 6922   Gx 20 29.9   -02  11 r  Aql          14.  p vF,  pL,  R
I1322      20 30.1   -15  13 d  Cap                F,  vS,  R
I1323   D* 20 30.5   -15  11 F  Cap                vS,  neb  *
I5020   Gx 20 30.6   -33  29 s  Mic          13.  p pF,  pS,  iE
 6918   Gx 20 30.8   -47  28 c  Ind    1.0         vF,  *12  att  sp
I5019   Gx 20 30.8   -36  05 c  Mic    2.0         vF,  cS,  R
I5010      20 31.0   -65  55 d  Pav                vF,  vS,  cE  20deg  ,  mbM
 6939   OC 20 31.4   +60  38 s  Cep    8.     7.8  Cl,  pL,  eRi,  pCM,  st  11...16
 6919   Gx 20 31.6   -44  13 r  Mic                eF,  pS,  R,  vgvlbN
 6923   Gx 20 31.7   -30  50 s  Mic    2.5   12.1  pF,  cS,  R,  gbM,  bet  2  st
I5017   Gx 20 32.1   -57  35 c  Ind    1.3         bM,  mag  14.5
I1324      20 32.2   -09  04 D  Cap                eeF,  S,  R,  *8  s
 6927   Gx 20 32.6   +09  55 v  Del    0.6   14.5  eF,  lE
I5009      20 32.6   -72  10 d  Pav                vF,  vS,  bM
I5008   Gx 20 32.7   -72  42 c  Pav    1.2         eF,  vS,  lE  90deg  ,  lbM
 6928   Gx 20 32.8   +09  56 s  Del    2.2   12.6  pB,  pL,  mE
I1325      20 32.8   +09  53 x  Del                vF,  S,  sev  F  st  inv;  = 6928
 6930   Gx 20 33.0   +09  52 s  Del    1.4   13.1  F,  mE
I1326      20 33.0   +09  54 x  Del                eeF,  S,  mE,  pF*  s;  = 6930
 6926   Gx 20 33.1   -02  01 s  Aql    2.1   12.4  vF,  pL,  E  176deg  ,  p  of  2
 6924   Gx 20 33.2   -25  30 r  Cap          14.  pF,  pS,  R,  sbMN
 6929   Gx 20 33.4   -02  02 s  Aql    0.9   13.5  vF,  vS,  sf  of  2
I5021      20 33.5   -54  31 d  Ind                vS,  R  disc,  mag  14
 6931   Gx 20 33.6   -11  23 r  Cap          14.  p eF,  pS,  E  120deg  ,  gbM
 6933   D* 20 33.6   +07  23 r  Del                pB,  vS,  6934  f
 6934   Gb 20 34.2   +07  24 s  Del    5.9    8.9  glob.  cl.  ,  B,  L,  R,  rrr,  st  16...,  *9  p
 6925   Gx 20 34.3   -31  59 s  Mic    4.1   11.3  cB,  L,  mE  6deg  ,  psIbM
 6940   OC 20 34.6   +28  18 s  Vul   31.     6.3  Cl,  vB,  vL,  vRi,  cC,  st  pL
 6938    - 20 34.8   +22  15 r  Vul                Cl,  vL,  P,  vlC
 6946   Gx 20 34.8   +60  09 s  Cep   11.0    8.9  vF,  vL,  vg,  vsbM,  rr
 6949   Gx 20 35.1   +64  48 r  Cep          15.  p eF,  pS,  iR
I5014      20 35.3   -73  28 d  Pav                F,  S,  bM,  bet  2  F  st
I5016      20 35.6   -72  55 d  Pav                eeF,  eS,  *11  sp  1'
I1327   Gx 20 35.7   +00  01 z  Aql          15.  p vF,  *8  1'  f
 6936      20 35.9   -25  17 D  Cap                vF,  vS,  R,  slbM
 6941   Gb 20 36.3   -04  38 r  Aql          13.  p eF,  lE,  lbM
 6986      20 36.6   -18  38 D  Cap                vF,  vS,  R,  glbMN
 6952   Gx 20 37.0   +66  06 D  Cep                pB,  oval,  dif,  *15  close  f;  = 6951
 6951   Gx 20 37.2   +66  06 s  Cep    3.8   11.1  pB,  pL,  lE
 6953      20 37.7   +65  46 D  Cep                vS  group  of  4  st  (no  neb)
I5023      20 38.1   -67  11 d  Pav                F,  S,  cE  130deg
 6935   Gx 20 38.4   -52  06 s  Ind    2.0   13.  p pB,  cL,  R,  glbM,  r,  p  of  2
 6944   Gx 20 38.4   +07  00 s  Del    1.7   13.3  pF,  S,  R
 6937   Gx 20 38.8   -52  09 s  Ind    3.0         vF,  cS,  R,  slbM,  f  of  2
 6945   Gx 20 38.9   -05  01 r  Aqr          13.  p pF,  vS,  R,  mbM
I5024      20 40.1   -71  06 d  Pav                eF,  S,  mE  15deg
I5029    ? 20 40.3   -29  50 x  Mic                eeF,  eS,  mE,  F*  sf,  np  of  2
I5030      20 40.6   -29  51 d  Mic                eeF,  vS,  mE,  v  dif,  sf  of  2
 6942   Gx 20 40.8   -54  19 s  Ind    2.6   13.  p pB,  pL,  R,  psIbM
I5022   Gx 20 41.1   -76  27 c  Oct    1.2         eF,  S,  R,  cbM,  susp
I5027      20 41.1   -55  29 d  Ind                R,  mag  15
 6950    - 20 41.2   +16  38 r  Del                Cl,  P,  vlC
 6947   Gx 20 41.3   -32  29 c  Mic    2.0         vF,  L,  R,  gbM
I1328   Gx 20 42.0   -19  38 m  Cap    0.8   15.  p F,  S,  vF*  close
 6932   Gx 20 42.1   -73  37 c  Pav    2.0         F,  S,  R,  gbM,  5  st  p
I5039   Gx 20 43.2   -29  51 s  Mic    2.5   12.6  eeF,  pS,  vmE,  sp  of  2
I5046   Gx 20 43.2   -29  51 c  Mic    1.9         eF,  pS,  mE,  2  vF  st  sf,  sp  of  2;  = IC  5039
I5028   Gx 20 43.4   -65  39 c  Pav    1.4         vF,  dif,  *10  s  2',  susp
 6948   Gx 20 43.5   -53  21 c  Ind    2.5         vF,  pS,  cE,  lbM
I5041   Gx 20 43.6   -29  42 c  Mic    3.0         eeF,  pS,  mE,  v  diffic,  nf  of  2
I5047   Gx 20 43.6   -29  42 c  Mic    3.0         eeF,  pS,  mE,  v  diffic,  nf  of  2;  = IC  5041
I1329      20 43.7   +15  35 d  Del                eeF,  pL,  R,  bet  4  st,  v  diffic
I5034   Gx 20 43.7   -57  02 c  Ind    1.6         bM,  mag  14.5
I5033      20 43.8   -57  19 d  Ind                vS,  R,  lbM,  mag  15
 6920   Gx 20 43.9   -80  00 c  Oct    1.8         pB,  cS,  R,  psmbM
 6956   Gx 20 44.0   +12  31 s  Del    2.1   14.  p vF,  S,  stell,  **  att
 6954   Gx 20 44.1   +03  13 s  Del    1.1   13.2  F,  S,  vlE
I5035      20 44.3   -57  08 d  Ind                vS,  R,  lbM,  mag  15
 6955   Gx 20 44.4   +02  35 r  Del          15.  p eF,  pL,  R
 6943   Gx 20 44.5   -68  45 s  Pav    4.1   12.  p pF,  L,  mE,  vglbM  vS*
I5036      20 44.7   -57  37 d  Ind                F,  pS,  mE  125deg
 6957   Gx 20 44.9   +02  34 r  Del          15.  p vF,  S,  R
I5025   Gx 20 45.0   -76  59 c  Oct    1.3         vF,  vS,  cE  125deg  ,  bM,  susp
I5031    ? 20 45.3   -67  32 x  Pav                eF,  eS,  R,  susp
I5050   Gx 20 45.3   -05  39 m  Aqr    1.0   14.  p F,  cS,  dif,  vS  E  N
I5032      20 45.4   -67  32 d  Pav                eF,  eS,  R,  susp
I5037      20 45.6   -58  26 d  Ind                F,  pS,  mE  170deg
 6960   Nb 20 45.7   +30  43 s  Cyg   70.          !!  pB,  cL,  eiF,  52  Cyg  inv
I1330   Gx 20 46.3   -14  02 m  Aqr    0.8   15.  p F,  vS,  dif
I5043      20 46.7   -56  59 d  Ind                F,  S,  E  210deg
I5038      20 46.9   -65  01 d  Pav                vF,  vS,  R,  alm  stell
 6959   Gx 20 47.1   +00  27 r  Aqr          14.  p vF
 6961   Gx 20 47.2   +00  23 r  Aqr          15.  p eF,  vS
I5057    * 20 47.2   +00  19 x  Aqr                cF,  neb*  or  eS  neb
 6962   Gx 20 47.3   +00  19 s  Aqr    3.0   12.0  cF,  S,  R,  bM
 6963   Gx 20 47.3   +00  29 s  Aqr    0.7   14.1  neb  *13
 6964   Gx 20 47.4   +00  18 s  Aqr    1.9   12.7  F,  vS,  R,  bM,  *14  sf  0'.5
 6965      20 47.4   +00  30 A  Aqr                vF,  vS;  = 6963
 6966   D* 20 47.4   +00  22 F  Aqr                eF,  vS
I5049   Gx 20 47.4   -38  25 c  Mic    1.2         eeF,  pS,  R
I5058    * 20 47.4   +00  29 x  Aqr                eF,  distinct  from  6963
 6967   Gx 20 47.6   +00  25 r  Aqr          14.  p eF,  vS,  *10  50"  f
I5061  *** 20 47.6   +00  20 x  Aqr                eF,  vS  Cl;  neb?
I5042      20 47.8   -65  05 d  Pav                vF,  vS,  R,  alm  stell
I5067      20 47.8   +44  22 d  Cyg                F
I1331   Gx 20 47.9   -09  59 m  Aqr    1.8   14.  p F,  S,  bM,  r
I5062   D* 20 48.2   -08  22 F  Aqr                *13.5  with  eF  st  &  neb,  *13  p  1'

 6968   Gx 20 48.4   -08  20 r  Aqr          14.  p F,  S,  R,  gbM,  F*  inv
 6969   Gx 20 48.4   +07  45 r  Del          15.  p F,  pL,  E
I5026   Gx 20 48.5   -78  04 c  Oct    2.5         eF,  vS,  mE  70deg  ,  lbM,  susp
 6958   Gx 20 48.6   -38  00 s  Mic    2.4   12.  p B,  cS,  R,  pgmbM,  4  st  p
I5056      20 49.0   -39  11 d  Mic                F,  cL,  eE  150deg
 6971   Gx 20 49.4   +06  00 r  Del          15.  p vF,  S,  R
 6972   Gx 20 50.0   +09  54 s  Del    1.4   14.  p F,  S,  R
I5044      20 50.6   -71  57 d  Pav                eF,  eS,  R
I5045      20 50.7   -71  58 d  Pav                eF,  eS,  R
 6974   Nb 20 50.8   +31  52 r  Cyg                neb*,  neby  cE  pf
I5068   Nb 20 50.8   +42  31 s  Cyg   80.          vF
I5070   Nb 20 50.8   +44  21 s  Cyg   80.          F,  dif
 6979   Nb 20 51.0   +32  09 r  Cyg                vF,  S,  iE,  sev  F  st  f  nr
I5059      20 51.3   -57  41 d  Ind                vF,  S,  R,  dif
I5048      20 51.6   -71  48 d  Pav                eF,  vS
I5065   Gx 20 51.8   -29  51 c  Mic    1.2         vF,  pS,  R
I1332   Gx 20 51.9   -13  43 m  Aqr    0.8   15.  p F,  vS,  R
I5063   Gx 20 52.0   -57  05 s  Ind    1.9   12.0  bM,  mag  13
 6970   Gx 20 52.1   -48  48 s  Ind    1.2   12.7  pB,  S,  lE,  gbM
 6973    * 20 52.1   -05  53 F  Aqr                vF,  S,  r
I5052   Gx 20 52.1   -69  12 s  Pav    5.8   12.  p F,  L,  eE  140deg  ,  4'  l
I1334   Gx 20 52.2   -16  17 m  Cap    1.1   15.  p F,  S
I1333      20 52.3   -16  15 d  Cap                vF,  vS,  sbM
I5040      20 52.3   -76  40 d  Oct                cB,  S,  R,  susp
I5051      20 52.3   -71  47 d  Pav                eF,  vS
 6975   Gx 20 52.4   -05  46 D  Aqr                vF,  S;  = 6976
 6976   Gx 20 52.4   -05  46 r  Aqr          14.  p eF,  iR
 6977   Gx 20 52.5   -05  44 r  Aqr          14.  p vF,  S,  iR
 6978   Gx 20 52.6   -05  43 s  Aqr    1.9   14.  p vF
I5064   Gx 20 52.6   -57  14 c  Ind    1.6         bM,  mag  14
 6980    * 20 52.8   -05  49 F  Aqr                vF,  S,  r
I5055      20 52.9   -68  27 d  Pav                vF,  bM,  susp
I1335      20 53.1   -16  20 d  Cap                F,  S,  stellar
 6981   Gb 20 53.5   -12  32 s  Aqr    5.9    9.4  glob.  cl.  ,  pB,  pL,  R,  gmCM,  rrr;  = M72
I5053   Gx 20 53.6   -71  08 c  Pav    1.9         cF,  vS,  bM,  *11  n  2'
I5054   Gx 20 53.7   -71  01 c  Pav    1.8         cF,  vS,  bet  2  F  st
 6989    - 20 54.1   +45  17 r  Cyg                Cl,  cL,  st  pS
I5060      20 54.6   -71  38 d  Pav                eF,  eS,  bet  2  F  st
I1336   Gx 20 55.1   -18  04 m  Cap    0.6   15.  p vF,  S,  dif,  F*  f
 6988   Gx 20 55.8   +10  32 r  Del          15.  p eF,  pL,  R
I5076   Nb 20 55.9   +47  25 s  Cyg    9.          vF,  vL,  lE  ns,  st  inv
 6985    - 20 56.0   -11  05 r  Aqr                eF,  vS,  iR
I1340   Nb 20 56.2   +31  04 s  Cyg   25.          possibly  conn  with  6995
 6992   Nb 20 56.4   +31  43 s  Cyg   60.          !!,  eF,  eL,  eE,  eiF,  bifurcated
 6996   OC 20 56.4   +45  28 A  Cyg                Cl,  P,  lC
 6997   OC 20 56.5   +44  38 o  Cyg   15.   10.  p Cl,  P,  lC,  st  L
 6991   OC 20 56.6   +47  25 r  Cyg                Cl,  L,  P,  vlC
 6983   Gx 20 56.8   -43  58 r  Mic                eF,  cS,  R
I1337      20 56.9   -16  35 d  Cap                F,  vS,  R,  gbM
I1338      20 57.0   -16  30 d  Cap                vF,  vS,  dif
 6995   Nb 20 57.1   +31  13 s  Cyg   12.          F,  eL,  neb  &  st  in  groups
I5066      20 57.1   -73  09 d  Pav                vF,  vS,  bM
 6982   Gx 20 57.4   -51  51 v  Ind                vF,  S,  E,  p  of  2
 6984   Gx 20 57.9   -51  52 s  Ind    1.7   13.  p F,  pL,  vlE,  vgbM,  f  of  2
I1339   Gx 20 57.9   -17  57 c  Cap    1.9         F,  S,  gbM,  r
 6987   Gx 20 58.0   -48  37 r  Ind                pF,  S,  vlE,  gpmbM,  B*  p  1'
 7000   Nb 20 58.8   +44  20 s  Cyg  120.          F,  eeL,  dif  nebulosity
 6994   OC 20 59.0   -12  38 s  Aqr    3.     9.  p Cl,  eP,  vlC,  no  neb;  = M73
 6993    - 20 59.5   -25  41 r  Cap                vF,  vS,  R,  sbMN
 6990   Gx 20 59.9   -55  34 c  Ind    1.1         eeF,  vS,  vmE  0deg  ,  *13  att,  n
I5069      21 00.0   -71  48 d  Pav                eF,  S,  R
I1341   Gx 21 00.4   -13  58 m  Aqr    0.5   15.  p F,  vS,  R,  lbM
I1342      21 00.4   -14  30 d  Aqr                vF,  vS,  E  pf,  lbM
 7023  C+N 21 00.5   +68  10 s  Cep   18.     7.  p *7  in  eF,  eL,  neby
 7008   Pl 21 00.6   +54  33 s  Cyg    1.4   13.  p cB,  L,  E  45deg  +/- ,  r,  **  att
 7003   Gx 21 00.8   +17  48 r  Del          14.  p vF,  vS,  lE,  *15  close  f
I5074      21 00.9   -63  08 d  Pav                R,  PN  ,  mag  14
 7001   Gx 21 01.2   -00  11 D  Aqr          14.  p pB,  S,  E  0deg
I1343      21 01.2   -15  24 d  Cap                pB,  vS,  R,  mbM
I1344   Gx 21 01.3   -13  22 m  Aqr    0.6   15.  p pB,  pL,  iF,  sbM
I5071   Gx 21 01.3   -72  39 c  Pav    3.5         cB,  S,  eE  20deg  ,  stell  N
I1345      21 01.4   -13  24 d  Aqr                vF,  S,  R,  vlbM
 7006   Gb 21 01.5   +16  11 s  Del    2.8   10.6  B,  pL,  R,  gbM
 6998   Gx 21 01.6   -28  01 r  Mic                eeF,  vS
I1346      21 01.7   -13  52 d  Aqr                pB,  vS,  R,  gbM
I1347   Gx 21 01.7   -13  19 v  Aqr    1.3         pB,  R
I1348      21 01.7   -13  21 d  Aqr                F,  vS,  R,  bM
I1349      21 01.8   -13  16 d  Aqr                vF,  vS,  R,  lbM
 7011    - 21 01.9   +47  19 r  Cyg                Cl,  no  description
I1351      21 01.9   -13  12 d  Aqr                F,  vS,  R,  lbM
I1352      21 01.9   -13  23 d  Aqr                pB
I1353      21 01.9   -13  16 d  Aqr                vF,  vS,  R
 6999   Gx 21 02.0   -28  04 c  Mic    0.9         eeF,  vS
 7005   OC 21 02.0   -12  53 F  Aqr                Cl,  S,  P
I1350   Gx 21 02.0   -13  51 m  Aqr    0.6   15.  p F,  S,  iF,  lbM,  r
I1354      21 02.0   -13  45 d  Aqr                F,  vS,  R,  bM
I1355      21 02.0   -13  10 d  Aqr                F,  vS,  R,  bM
I5072      21 02.0   -72  59 d  Pav                eF,  eS,  R
I5080   Gx 21 02.5   +19  13 z  Del          16.  p F,  vS,  R,  stell  N
I5078   Gx 21 02.6   -16  49 c  Cap    4.0         eE,  nr  2nd  *  of  3;  susp
I1356      21 02.9   -15  48 d  Cap                F,  R,  sbM
I5081      21 03.0   +19  12 d  Del                vF,  vS,  R,  stell  N
I5073   Gx 21 03.3   -72  41 c  Pav    1.2         eF,  S,  R
 7002   Gx 21 03.6   -49  01 r  Ind                cF,  cS,  R,  bM
 7013   Gx 21 03.6   +29  54 s  Cyg    4.9   12.  p pB,  cS,  R,  psbM,  pB*  np
I5083   Gx 21 03.8   +11  46 z  Equ          15.  p eeF,  vS,  v  diffic;  *8  f  13s
 7004   Gx 21 03.9   -49  07 r  Ind                eF,  R,  lbM,  *11  f
 7009   Pl 21 04.2   -11  22 s  Aqr    1.7    8.  p !!!,  PN  ,  v8,  S,  elliptic
I5075      21 04.5   -71  51 d  Pav                vF,  S,  cbM
 7010   Gx 21 04.7   -12  20 r  Aqr          14.  p eF,  S,  R,  lbN;  = IC  5082
I5082      21 04.7   -12  21 x  Aqr                eF,  S;  = 7010
 7007   Gx 21 05.5   -52  33 s  Ind    1.9   13.  p pB,  S,  R,  psbM,  am  st
I5079   OC 21 05.5   -56  15 x  Ind                F,  S,  E;  vS  Cl  or  ring?  (RA  +/-  )
 7015   Gx 21 05.7   +11  25 s  Equ    2.0   13.  p vF,  pS,  glbM
I1357      21 05.9   -10  43 d  Aqr                vF,  vS,  iF,  vlbM
 7024    - 21 06.0   +41  30 r  Cyg                Cl,  P,  lC,  st  10...
 7026   Pl 21 06.3   +47  51 s  Cyg    0.4   13.  p pB,  biN,  PN
 7019   Gx 21 06.4   -24  25 c  Cap    0.7         vF,  vS,  R,  sbMN
I1358      21 06.5   -16  12 d  Cap                vF,  vS
 7012   Gx 21 06.8   -44  49 c  Mic    3.2         F,  pL,  E,  vgvlbM,  *  p
 7027   Pl 21 07.1   +42  14 s  Cyg    0.3   10.  p PN  ,  stellar  =  8.5m
 7031   OC 21 07.3   +50  50 s  Cyg    5.     9.1  Cl  of  triple  st,  lC
 7016   Gx 21 07.4   -25  30 r  Cap          15.  p vF,  eS,  R,  bMN,  1st  of  3
 7017   Gx 21 07.5   -25  30 r  Cap          15.  p eF,  vS,  R,  bMN,  2nd  of  3
 7018   Gx 21 07.6   -25  28 r  Cap          14.  p vF,  vS,  vlE,  glbM,  3  of  3
 7014   Gx 21 07.9   -47  11 s  Ind    1.9   12.3  pF,  S,  R,  bM,  2  st  12  n
 7025   Gx 21 07.9   +16  20 r  Del          14.  p vF,  vS,  R,  stell
 7028    - 21 08.3   +18  29 r  Del                vF,  S,  vlE
I5086   Gx 21 08.5   -29  46 c  Mic    2.0         eeF,  pS,  R,  F*  f
I1359   Gx 21 08.7   +12  27 u  Del    1.1   15.  p eeF,  eS,  stellar,  eF*  att
I5077      21 09.0   -73  39 d  Pav                eF,  eS,  *10  np  2'
I5084   Gx 21 09.2   -63  17 c  Pav    1.6         F,  pS,  eE  155deg  ,  cbM
I5088   Gx 21 09.4   -22  53 c  Cap    1.8         eF,  vS,  diffic
 7022   Gx 21 09.5   -49  18 r  Ind                eeF,  S,  R,  B***  sf
 7033   Gx 21 09.6   +15  07 r  Peg          15.  p vF,  S,  R
 7034   Gx 21 09.7   +15  09 r  Peg          15.  p vF,  vS,  R
 7036    - 21 10.2   +15  27 r  Peg                Cl,  lC
I1363    ? 21 10.6   +46  51 x  Cyg                F,  *9.4  at  s  end
 7037    - 21 10.7   +33  43 r  Cyg                Cl,  pRi,  iF,  st  11...15
 7035   Gx 21 10.8   -23  08 c  Cap    1.2         eF,  S,  iR
I1360   Gx 21 10.8   +05  04 x  Equ                F,  dif
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I5089      21 11.0  -03 51 d  Aqr                eF,  vS,  bM,  F* 30"  sp
 7030   Gx 21 11.2  -20 30 r  Cap                vF,  vS,  iR,  bMN
 7039   OC 21 11.2  +45 39 s  Cyg   25.     7.6  Cl,  vL,  pRi,  E,  st 10...
 7021      21 11.3  -64 02 c  Pav                pF,  cS,  R,  psbM,  *7- 8 p;  = 7020
 7020   Gx 21 11.4  -64 03 s  Pav     4.3  12.  p pB,  cS,  lE,  pgbM
I1361   Gx 21 11.5  +05 03 u  Equ     1.1  15.  p vF,  vS,  dif
I5090   Gx 21 11.6  -02 02 u  Aqr     1.1  14.  p vF,  S,  R,  sbM
I1362   Gx 21 11.8  +02 20 z  Aqr                16.  p vF,  vS,  R,  *14  nf
 7029   Gx 21 11.9  -49 17 s  Ind     1.4  11.8   B,  cS,  R,  pgmbM
I1369   OC 21 12.1  +47 44 s  Cyg     4.     6.8  S neb  Cl  of  st  13m
 7044   OC 21 12.9  +42 29 r  Cyg                11.  p Cl,  vF,  pL,  vRi,  vC  st  15...18
 7040   Gx 21 13.2  +08 51 r  Equ                15.  p eF,  vL,  mE  ns
I1364   Gx 21 13.3  +02 47 m  Equ     0.3  15.  p pB,  pS,  R,  sbM
I5085      21 13.4  -74 06 d  Pav                vF,  vS,  R
 7042   Gx 21 13.8  +13 33 s  Peg     2.2  13.  p vF,  S,  R
I1365   Gx 21 13.9  +02 35 m  Equ     0.2  15.  p eF,  pS,  R  (another  p?)
 7043   Gx 21 14.1  +13 36 r  Peg                15.  p vF,  S,  R
I1366   Gx 21 14.1  +01 45 z  Aqr                16.  p F,  S,  iR,  bet  2 st  11  &  13
 7048   Pl 21 14.2  +46 16 s  Cyg     1.0  11.  p pF,  pL,  dif,  iR,  vlbM
I1367   Gx 21 14.2  +02 59 z  Equ                15.  p vF,  vS,  R,  F,  * nr
I1368      21 14.3  +02 10 D  Aqr                eeF,  S,  mE  225deg  , v diffic
I5087   Gx 21 14.3  -73 46 c  Pav     1.4        vF,  vS,  *11  np  3'
 7045   D* 21 14.8  +04 31 A  Equ                not  a neb;  only  2  F close  st
 7046   Gx 21 14.9  +02 50 s  Equ     2.0  14.  p eF,  pL,  R,  lbM
I5097  *** 21 15.0  +04 27 x  Equ                eF,  stell,  3' sf  7045
I5098   D* 21 15.0  +04 29 x  Equ                eF,  2'.5  sff  7045
 7050    - 21 15.1  +36 12 r  Cyg                Cl,  no  description
 7038   Gx 21 15.2  -47 13 s  Ind     3.0  12.  p pB,  pL,  lE,  gbM
I1370   Gx 21 15.2  +02 12 z  Aqr                15.  p vF,  2 F  st  inv
 7032   Gx 21 15.4  -68 17 c  Pav     1.1        vF,  cS,  R,  glbM
I5092   Gx 21 16.2  -64 28 c  Pav     2.9        pL,  E,  mbM
 7041   Gx 21 16.5  -48 22 s  Ind     3.9  11.1   B,  cS,  cE,  psmbM,  *10  f
 7047   Gx 21 16.5  -00 50 r  Aqr                14.  p eF,  vS,  biN  pf
I5095      21 17.3  -59 56 d  Pav                pL,  E
I5091      21 17.7  -70 39 d  Pav                eF,  vS,  R
I5094   Gx 21 17.8  -66 26 c  Pav     1.4        vF,  vS,  R,  * np  0'.5
I5096   Gx 21 18.4  -63 46 c  Pav     3.0        F,  pL,  eE  145deg  ,  stell  N
 7052   Gx 21 18.6  +26 27 s  Vul     2.8  14.  p F,  S,  vlE,  r
I5093      21 18.8  -70 38 d  Pav                eeF,  vS,  R,  susp
 7049   Gx 21 19.0  -48 34 s  Ind     2.8  10.7   vB,  pS,  E,  mbM
 7055    - 21 19.4  +57 35 r  Cep                Cl,  F,  pS,  P
 7051   Gx 21 19.8  -08 47 r  Aqr                14.  p vF,  R,  gbM,  **   nr
I1371   Gx 21 20.3  -04 53 m  Aqr     0.8  15.  p F,  S,  dif,  gbM,  r
I1372      21 20.3  -05 37 d  Aqr                vF,  vS,  R,  dif,  *14  sf
I1373   Gx 21 20.6  +01 05 m  Aqr     0.3  15.  p F,  vS,  R,  sbM,  2 others  south
 7054    - 21 20.7  +39 10 r  Cyg                vF,  vS,  R,  F*  inv
 7058    - 21 21.0  +50 48 r  Cyg                Cl,  P,  lC
I1374   Gx 21 21.0  +01 43 z  Aqr                16.  p vF,  vS,  lbM
I1375   Gx 21 21.0  +04 00 z  Equ                15.  p F,  S,  2 F  st  inv
 7053   Gx 21 21.1  +23 04 r  Peg                14.  p pB,  S,  vlE
I5104   Gx 21 21.5  +21 14 u  Peg     1.8  14.  p F,  vS,  E ns,  dif,  *14  nr
I5100   Gx 21 21.7  -65 56 c  Pav     1.7        F,  S,  cE  110deg
I5099      21 21.9  -71 00 d  Pav                vF,  S,  lE  10deg
I5101   Gx 21 21.9  -65 50 c  Pav     1.4        cF,  S,  * in  neb
 7056   Gx 21 22.2  +18 39 r  Peg                14.  p pF,  S,  R
I1378      21 23.0  +55 27 d  Cep                F,  dif,  F  st  inv
 7062   OC 21 23.2  +46 23 s  Cyg     7.     8.3  Cl,  pS,  pRi,  pC,  st  13...
 7067   OC 21 24.2  +48 01 s  Cyg     3.     9.7  Cl,  P,  neb?
 7063   OC 21 24.4  +36 30 s  Cyg     8.     7.0  Cl,  P,  st  10...
I5105   Gx 21 24.4  -40 37 s  Mic     2.5  11.5   vF,  vS,  R,  st  n  &  s
I1376      21 24.7  -05 45 d  Aqr                no  descr
 7057   Gx 21 25.0  -42 29 r  Mic                eF,  vS,  R,  p  of  2
I1377   Gx 21 25.4  +04 19 m  Equ     0.6  14.  p pB,  S,  R
 7060   Gx 21 25.9  -42 24 r  Mic                vF,  pS,  R,  f  of  2
I1379   Gx 21 26.0  +03 06 z  Equ                16.  p vF,  bM,  stellar
 7066   Gx 21 26.2  +14 10 r  Peg                15.  p eeF,  close  sf  of  M  of  3  F  st
 7076   Nb 21 26.3  +62 53 s  Cep     2.         vF,  er
I5102      21 26.3  -73 19 d  Pav                eF,  eS,  bM
 7071    - 21 26.5  +47 57 r  Cyg                Cl,  S,  C,  cE;  = 7067?
 7068   Gx 21 26.6  +12 13 r  Peg                15.  p vF,  close  to  a  S*
 7065   Gx 21 26.7  -07 00 s  Aqr     1.4        vF,  sbM
I1382      21 26.9  +18 39 d  Peg                pF,  pS,  iF
I1380   Gx 21 27.1  +02 43 z  Peg                15.  p pB,  S
 7059   Gx 21 27.4  -60 01 s  Pav     3.2  13.  p B,  pL,  lC,  gpmbM
 7061   Gx 21 27.4  -49 04 c  Ind     1.5        eeF,  vS,  R
I1381   Gx 21 27.6  -01 11 m  Aqr     0.5  15.  p F,  vS,  R,  bM
I1383   Gx 21 27.7  -01 05 z  Aqr                16.  p F,  vS,  R,  stellar
I1384   Gx 21 27.8  -01 22 m  Aqr     0.6  14.  p vF,  vS,  R
 7069   Gx 21 28.1  -01 38 r  Aqr                15.  p vF,  S,  R,  stell
I5111   Gx 21 28.2  +02 29 m  Aqr     0.8  15.  p F,  S,  iF
I5107      21 28.3  -65 44 d  Pav                eF,  vS,  cE  10deg
I5106   Gx 21 28.6  -70 50 c  Pav     1.3        F,  S,  R,  bM
I1385   Gx 21 28.9  -01 04 m  Aqr     0.4  15.  p pB,  vS,  R
 7064   Gx 21 29.0  -52 46 s  Ind     4.1  13.  p eF,  pL,  vmE  91deg  ,  * s
I5103   Gx 21 29.2  -74 04 c  Pav     1.4        eF,  vS,  R
 7082   OC 21 29.4  +47 05 s  Cyg   25.     7.2  Cl,  L,  cRi,  lC,  st  10...13
 7073   Gx 21 29.5  -11 28 r  Cap                14.  p vF,  vS,  iR
 7074   Gx 21 29.5  +06 42 r  Peg                vF,  S,  E
I5112   OC 21 29.5  +06 47 x  Peg                Cl,  eF,  eS
I1386   Gx 21 29.6  -21 12 c  Cap     2.1        F,  biN,  or  neb  D*
I1387   Gx 21 29.6  -01 21 m  Aqr     0.4  15.  p pB,  vS,  iF
I5113   OC 21 29.7  +06 49 x  Peg                Cl,  eF,  S;  nebs?
 7077   Gx 21 29.9  +02 25 s  Aqr     0.8  14.  p F
I1388   Gx 21 29.9  -00 38 m  Aqr     0.4  15.  p eF,  vS,  2 st  nf
 7078   Gb 21 30.0  +12 10 s  Peg    12.3   6.4  !,  glob.  cl.  ,  vB,  vL,  iR,  vsmbM,  rrr,  st
   vS;  = M1
 7080   Gx 21 30.0  +26 43 s  Vul     2.0  14.  p vF,  S,  vlE
 7070   Gx 21 30.5  -43 06 s  Gru     2.1  12.3   F,  cL,  lE,  gvlbM,  p  of  2
 7086   OC 21 30.5  +51 35 s  Cyg     9.     8.4  Cl,  cL,  vRi,  pC,  st  11...16
I5115      21 30.5  +11 47 d  Peg                eeF,  vS,  F*  f
 7072   Gx 21 30.6  -43 09 s  Gru     0.8  13.9   F,  S,  R,  vglbM,  f  of  2
I5110      21 30.6  -59 59 d  Ind                vF,  vlE
 7081   Gx 21 31.4  +02 30 r  Aqr                13.  p F,  S,  R,  mbM,  *14  s
 7075   Gx 21 31.5  -38 36 r  Gru                cF,  cS,  R,  pgbM
 7084    - 21 31.8  +17 25 r  Peg                Cl,  lC
I1389      21 32.1  -18 01 d  Cap                F,  vS,  R,  gbM
 7092   OC 21 32.2  +48 26 s  Cyg    32.     4.6  Cl,  vL,  vP,  vlC,  st  7...10;  = M39
 7085   Gx 21 32.3  +06 36 r  Peg                15.  p eF,  S,  E
 7079   Gx 21 32.5  -44 05 s  Gru     2.8  11.6   B,  R,  cS,  psbM
I1390   Gx 21 32.5  -01 52 z  Aqr                15.  p F,  vS,  R,  bM
I5117   Pl 21 32.5  +44 35 s  Cyg     0.1  13.  p PN  , stellar
I5108   Gx 21 32.9  -72 40 c  Ind     1.4        eF,  vS,  cbM
 7088    - 21 33.4  -00 23 r  Aqr                eF,  eL,  dif,  E  pf,  n  of  M2
 7089   Gb 21 33.5  -00 49 s  Aqr    12.9   6.5  !!,  glob.  cl.  ,  B,  vL,  gpmbM,  rrr,  st  eS;  =
   M2
I5109      21 33.9  -74 06 d  Ind                vF,  bM
I5119   Gx 21 34.0  +21 49 u  Peg     1.0  15.  p F,  vS,  dif,  *15  att,  *13  n
 7091   Gx 21 34.1  -36 38 r  Gru                eF,  pL,  vgbM,  *6  f  40s
I5114   Gx 21 34.1  -36 39 c  Gru     2.0        eF,  pS,  R,  2 st  f  30s  ;  = 7091
 7087   Gx 21 34.6  -40 49 r  Gru                cF,  S,  R,  gbM
 7093    - 21 34.8  +46 01 r  Cyg                Cl,  P,  lC
I1391   Gx 21 35.1  -00 30 z  Aqr                16.  p vF,  S,  dif
I1392   Gx 21 35.6  +35 24 u  Cyg     1.7  13.  p pB,  vmbM*
 7083   Gx 21 35.7  -63 54 s  Ind     4.5  12.  p pF,  cL,  vlE,  vgpmbM,  r
 7090   Gx 21 36.5  -54 33 s  Ind     7.1  11.  p pB,  pL,  vmE  127deg  ,  g,  pslbM
 7094   Pl 21 36.9  +12 47 s  Peg     1.6        * in  eeF  neby,  v  diffic
I5116      21 37.1  -70 59 d  Ind                cF,  S,  R,  stell  N
I5120   Gx 21 38.8  -64 21 c  Ind     2.1        F,  alm  R
I1396  C+N 21 39.1  +57 30 s  Cep   170.     3.5  neb  part  of  Milky  Way
 7100   Gx 21 39.5  +08 53 r  Peg                14.  p vF,  r
 7101    ? 21 39.6  +08 54 D  Peg                F,  vS,  R,  stell;  = 7100?
 7102   Gx 21 39.7  +06 17 s  Peg     1.9  13.1   F,  pL,  R;  = IC 5127
I5122      21 39.8  -22 24 d  Cap                eF,  vS;  7103- 04,  IC  1393  nr
I5127      21 39.8  +06 14 x  Peg                eF,  pL,  sev  eF  st  &  neb;  = 7102
 7103   Gx 21 39.9  -22 28 r  Cap                15.  p vF,  vS,  R,  gbM,  1st  of  2
I5124      21 39.9  -22 26 d  Cap                eeF,  S,  diffic;  another  susp  1' s
 7104   Gx 21 40.1  -22 25 r  Cap                15.  p vF,  vS,  iR,  gbMN,  2nd  of  2
I5126      21 40.1  -05 22 d  Aqr                vF,  vS,  R,  bet  2 st  14
 7095   Gx 21 40.2  -42 32 c  Gru     1.6        F,  pL,  R,  vglbM,  *13  inv;  = 7097
I1393      21 40.2  -22 25 d  Cap                eF,  vS,  R,  dif
I1394   Gx 21 40.2  +14 38 m  Peg     0.8  15.  p eF,  S,  R
 7097   Gx 21 40.3  -42 32 s  Gru     2.5  12.  p B,  S,  vlE,  mbM
I5118      21 40.3  -71 23 d  Ind                vF,  S,  cE  35deg  ,  *10  sp  2'
 7099   Gb 21 40.4  -23 11 s  Cap    11.0   7.5  !,  glob.  cl.  ,  B,  L,  lE,  gpmbM,  st  12...16;
   = M30
 7105    - 21 40.5  -10 20 r  Cap                F,  vS,  E  130deg  ,  smbMN,  * np;  nonexistent?
 7096   Gx 21 41.3  -63 54 s  Ind     2.7  13.  p vF,  S,  R,  vS**   nf
 7129  C+N 21 41.3  +66 06 s  Cep     8.   12.  p !,  cF,  pL,  gbM  ***
I5121   Gx 21 41.3  -63 55 c  Ind     1.7        PN  , stellar,  13 mag;  = 7096
 7114    - 21 41.7  +42 50 r  Cyg                nebulous  var  *;  PN  ?
I1395   Gx 21 41.7  +04 07 z  Peg                15.  p vF,  vS,  iF,  lbM
 7111   Gx 21 41.8  -06 43 r  Aqr                15.  p eF,  eS,  R,  bM
I5125   Gx 21 41.8  -52 46 c  Ind     1.4        F,  eS,  R,  bM
 7109   Gx 21 41.9  -34 27 r  PsA                eF,  vS,  am  st
 7110   Gx 21 42.2  -34 10 r  PsA                F,  S,  R,  bM
 7112   Gx 21 42.3  +12 30 r  Peg                15.  p eeF,  S,  R,  pB*  close  p
I5132      21 42.3  +66 08 d  Cep                1st  of  2 st  13m  in  vF  neb
 7107   Gx 21 42.4  -44 48 s  Gru     1.9  13.  p vF,  cL,  R,  vglbM
 7108   Gx 21 42.4  -06 47 r  Aqr                vF,  S,  R,  stell
 7113   Gx 21 42.4  +12 35 r  Peg                15.  p vF,  S,  stell
I5133      21 42.4  +66 09 d  Cep                2nd  of  2 st  13m  in  vF  neb
 7106   Gx 21 42.6  -52 42 c  Ind     1.8        eF,  cS,  lE,  vglbM
 7116   Gx 21 42.6  +28 57 r  Cyg                14.  p vF,  pL,  mE
 7133   Nb 21 42.6  +66 03 r  Cep                vF,  pL
I5128      21 42.7  -39 00 d  Gru                eeF,  vS,  R,  dif,  st  sp
I5134      21 43.0  +66 06 d  Cep                *9.5  in  neb;  7129  close
 7115   Gx 21 43.6  -25 21 r  PsA                14.  p vF,  pS,  mE  90deg  ,  com,  2 st  inv
 7127   OC 21 43.9  +54 37 s  Cyg     3.         Cl,  S,  P,  lC
 7128   OC 21 44.0  +53 43 s  Cyg     3.     9.7  Cl,  S,  pRi,  has  a  ruby  *9.5
I1397      21 44.0  -04 53 d  Aqr                F,  vS,  stellar
I1400      21 44.2  +52 57 d  Cyg                F,  dif,  partly  resolved
 7120   Gx 21 44.4  -06 33 r  Aqr                15.  p vF,  S,  vlE
I1402      21 44.8  +53 16 d  Cyg                F,  partly  res,  st  14m
I5123   Gx 21 44.8  -72 25 c  Ind     1.9        cF,  vS,  cE  15deg  ,  *12  p  1'
 7121   Gx 21 44.9  -03 37 r  Aqr                14.  p vF,  vS,  R,  vlbM
 7117   Gx 21 45.7  -48 24 r  Gru                F,  S,  R,  glbM,  p  of  2
 7122   D* 21 45.7  -08 49 F  Cap                nebulous  *  10- 11  or  vS  Cl
 7139   Pl 21 45.9  +63 39 s  Cep     1.3        vF,  cS,  R,  r
 7142   OC 21 45.9  +65 48 s  Cep     4.     9.3  Cl,  cL,  cRi,  pC,  st  11...14
I1398   Gx 21 45.9  +09 28 m  Peg     0.8  15.  p vF,  vS,  bM
 7118   Gx 21 46.1  -48 21 r  Gru                F,  S,  R,  glbM,  f  of  2
I1399   Gx 21 46.1  +04 24 z  Peg                16.  p vF,  vS,  stellar
 7119   Gx 21 46.3  -46 31 s  Gru     1.1  14.  p F,  S,  R,  gbM
 7098   Gx 21 46.8  -75 07 v  Oct     4.4        pF,  R,  g,  psmbM,  am  st
I1401   Gx 21 46.9  +01 42 v  Aqr     2.2        pB,  pS,  r
 7132   Gx 21 47.2  +10 14 r  Peg                14.  p vF,  pL,  lE,  bet  2 st
I5131   Gx 21 47.4  -34 53 s  PsA     1.6  12.4   vF,  vS,  R
 7131   Gx 21 47.7  -13 11 r  Cap                14.  p vF,  S,  vlE,  vgbM
I5129      21 47.8  -65 23 d  Ind                no  descr
 7124   Gx 21 48.1  -50 34 s  Ind     2.7  13.  p pB,  L,  pmE,  vgbM
 7137   Gx 21 48.2  +22 10 s  Peg     1.5  12.4   F,  pS,  R,  vglbM,  r
 7130   Gx 21 48.3  -34 57 A  PsA                pB,  S,  R,  glbM;  = IC 5135
I5135   Gx 21 48.3  -34 57 s  PsA     1.3  12.3   vF,  pL,  R;  = 7130
I5136      21 48.8  -33 39 d  PsA                eeF,  S,  R
 7134  Ast 21 48.9  -12 59 D  Cap                only  3 or 4 vF st (no neb)
 7143   D* 21 48.9  +29 57 r  Cyg                vF;  D*?  (inv  in  neb?)
 7138   Gx 21 49.0  +12 30 r  Peg                15.  p vF,  vS,  stell
 7125   Gx 21 49.3  -60 43 s  Ind     3.2  13.  p eF,  pL,  R,  sp  of  2
 7126   Gx 21 49.3  -60 37 s  Ind     2.3  13.  p pB,  pS,  lE,  gbM,  nf  of  2
 7136   D* 21 49.7  -11 47 F  Cap                stellar,  nebulosity  doubtful
 7135   Gx 21 49.8  -34 53 s  PsA     2.8  11.7   pB,  pL,  R,  vgbM,  *14  att  p
 7150  Ast 21 50.4  +49 45 A  Cyg                neb,  no  description
I5130   Gx 21 50.4  -74 00 c  Ind     2.4        vF,  vS
I5139   Gx 21 50.4  -31 00 c  PsA     2.2        vF,  S,  lE
I1403      21 50.5  -02 43 d  Aqr                eF,  S,  F,  * att,  v  diffic
 7123   Gx 21 50.8  -70 20 c  Ind     3.5        pB,  S,  R,  vgbM,  *9  f
I1405   Gx 21 50.8  +02 01 u  Aqr     1.0  15.  p pB,  vS,  R,  bM
I1404      21 50.9  -09 16 d  Cap                F,  vS,  R,  sbM  *13
I1406   Gx 21 51.0  +01 59 z  Aqr                15.  p F,  vS,  R,  stellar
I5137      21 51.6  -65 35 d  Ind                eF,  S,  R,  stell  N,  spir?;  susp
 7146   Gx 21 51.8  +03 01 r  Peg                15.  p F,  R
 7147   Gx 21 52.0  +03 04 r  Peg                15.  p F,  S,  lE
 7148   D* 21 52.1  +03 20 F  Peg                vF,  vS,  R
 7141   Gx 21 52.2  -55 34 v  Ind                F,  L,  R,  gpsmbM
 7149   Gx 21 52.2  +03 18 r  Peg                14.  p vF,  vS,  R
 7140   Gx 21 52.3  -55 34 c  Ind                pF,  cS,  R,  bM;  = 7141
I1407   Gx 21 52.3  +03 26 z  Peg                15.  p F,  S,  r
 7144   Gx 21 52.7  -48 15 s  Gru     3.5  10.7   vB,  pS,  R,  mbMN
I1408   Gx 21 53.2  -13 21 m  Cap     0.6  15.  p F,  vS,  R,  bM
 7145   Gx 21 53.3  -47 53 s  Gru     2.5  11.2   B,  S,  R,  in  triangle  of  st  13
I1409      21 53.3  -07 30 d  Aqr                eF,  S,  iF
I5141   Gx 21 53.3  -59 30 c  Ind     1.8        PN  , stell,  15  mag
I5146  C+N 21 53.4  +47 16 s  Cyg    12.     7.2  pB,  vL,  iF,  *9.5  in  M
I5138      21 53.5  -68 57 d  Ind                eF,  eS,  R,  susp
 7160   OC 21 53.7  +62 36 s  Cep     7.     6.1  Cl,  P,  vlC
 7152   Gx 21 53.9  -29 16 r  PsA                14.  p eeF,  vS
I5144      21 53.9  +15 06 d  Peg                F,  S,  sev  F  st  close  f
I5145      21 54.2  +15 13 d  Peg                no  descr
I5140   Gx 21 54.3  -67 20 c  Ind     1.9        eF,  vS,  mE  135deg
 7153   Gx 21 54.4  -29 02 r  PsA                14.  p eF,  S,  E  or  has  eF*  nr
 7156   Gx 21 54.6  +02 57 s  Peg     1.7  13.0   F,  pL,  R,  bM,  r
 7151   Gx 21 55.0  -50 40 r  Ind                vF,  pL,  lE,  vgbM,  r
I5142   Gx 21 55.3  -65 31 c  Ind     1.4        eF,  vS,  R,  bet  2 st,  susp
 7154   Gx 21 55.4  -34 49 v  PsA     1.3        B,  pL,  iR,  glbM,  r
I1410      21 56.0  -02 53 d  Aqr                pF,  vSN
I1411   Gx 21 56.1  -01 31 u  Aqr     0.9  14.  p F,  vS,  R,  vlbM
 7155   Gx 21 56.2  -49 32 s  Ind     1.9  13.  p pB,  S,  lE,  mbM
I5143      21 56.3  -49 03 d  Gru                eeF,  pS,  R
 7159   Gx 21 56.4  +13 34 r  Peg                15.  p eeF,  eS,  R,  vF*  sf  inv
 7164   Gx 21 56.6  +01 22 r  Aqr                eF,  R,  4 vF  st  n
 7157   Gx 21 56.8  -25 23 r  PsA                14.  p vF,  vS,  R,  sbMN,  B  D*  p  8s
 7161   D* 21 57.0  +02 57 F  Peg                Cl,  vS,  st  19,  bet  2 st  16
 7158  *** 21 57.4  -11 36 F  Cap                vF  neb*,  *9.5  nf  3'
I1412   Gx 21 58.3  -17 11 c  Cap     1.6        F,  vS;  D  stell  neb?
I1414      21 58.3  +08 24 d  Peg                vF,  vS,  R,  2 F  st  s
I1413      21 58.5  -03 06 d  Aqr                F,  S,  stellar
I1415    * 21 58.7  +01 21 F  Aqr                eF,  *9.5  sf  8'
I5149      21 58.7  -27 23 d  PsA                eF,  S,  R,  *6.5  f  63s   on  par
 7175    - 21 58.8  +54 49 r  Cyg                Cl,  vL,  pRi,  lC
I1416      21 58.8  +01 27 D  Aqr                eF,  trace  of  neby
I5151   Gx 21 58.9  +03 45 z  Peg                15.  p F,  vS,  R,  gbMN,  r
I5150      21 59.2  -39 25 d  Gru                pB,  pL,  annular
 7163   Gx 21 59.3  -31 53 s  PsA     1.8  13.4   F,  pL,  vlE,  vglbM
I5147   Gx 21 59.4  -65 27 c  Ind     1.4        eF,  eS,  R,  F*  f  2'
 7165   Gx 21 59.5  -16 31 r  Aqr                14.  p eF,  bM  *13
I5148   Pl 21 59.5  -39 23 s  Gru     2.0        vF,  L,  lE,  * att
 7162   Gx 21 59.8  -43 19 s  Gru     2.8  13.  p cF,  cL,  cE,  glbM
I1417   Gx 22 00.4  -13 09 v  Aqr     1.4        pB,  pL,  part  more  condensed
I5153    ? 22 00.4  +17 51 x  Peg                eF,  st?;  *9.5  sf  1'.4
 7167   Gx 22 00.5  -24 38 r  Aqr                13.  p F,  pS,  R,  vglbM,  *10  f
 7166   Gx 22 00.7  -43 25 s  Gru     2.4  11.8   cB,  S,  vlE,  smbMN
 7177   Gx 22 00.7  +17 44 s  Peg     3.3  11.2   pB,  pS,  R,  bMN,  r,  * sp
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 7171   Gx 22 01.0   -13 16 s  Aqr    2.8   12.3   vF,  cL,  E 124deg  , vgbM
 7186      22 01.0   +35 06 D  Peg                  vF,  am  5 or  6 st
 7170      22 01.4   -05 27 D  Aqr                  vF,  pS,  iR,  bMN,  D* p 36s
 7181   Gx 22 01.8   -01 58 r  Aqr          15.  p eF,  vS,  stellar
 7182   Gx 22 01.9   -02 12 r  Aqr          15.  p eF,  vS,  stellar
 7172   Gx 22 02.0   -31 52 s  PsA    2.2   11.9   pB,  pL,  lE,  gbM,  1st  of  4
 7173   Gx 22 02.0   -31 58 s  PsA    1.3   12.1   cB,  cS,  R,  sbM*,  2nd  of  4
I1418   Gx 22 02.0   +04 21 m  Peg    0.8   14.  p vF,  S
 7168   Gx 22 02.1   -51 45 s  Ind    2.0   13.  p pB,  S,  R,  psbM
 7174   Gx 22 02.1   -31 59 s  PsA    1.3   12.6   cF,  S,  R,  p  of  Dneb,  3rd  of  4
 7176   Gx 22 02.1   -31 59 s  PsA    1.3   11.9   B,  pL,  R,  f  of  Dneb,  4th  of  4
I5155    * 22 02.1   +00 30 F  Aqr                  eF,  S,  smbM,  *13  f  1'.5
 7180   Gx 22 02.3   -20 33 s  Aqr    1.8   12.5   vF,  S,  R,  lbM,  p  of  2
 7183   Gx 22 02.4   -18 56 r  Aqr          14.  p vF,  pL,  E  90deg  ,  lbM
 7178   Gx 22 02.5   -35 49 r  PsA                  eF,  S,  R,  *8  s  2'
I1420   Gx 22 02.6   +19 45 s  Peg    1.6   14.  p eeF,  pS,  R,  bet  2  F  st
 7184   Gx 22 02.7   -20 49 s  Aqr    5.8   12.  p pB,  pL,  mE  64deg  ,  bet  3  st,  er
 7187   Gx 22 02.7   -32 48 c  PsA    1.7          pF,  pS,  R,  lbM
I5159    * 22 02.7   +00 21 x  Aqr                  eF,  vS,  stell,  *11.5  nff  1'.5
 7169   Gx 22 02.8   -47 42 c  Gru    1.0          eF,  S,  R,  *8  np
 7197   Gx 22 02.9   +41 03 r  Lac          14.  p F,  cS,  cE,  vglbM,  er
I5152   Gx 22 02.9   -51 17 s  Ind    4.5   12.  p F,  cL,  cE  150deg  ,  cbM
I1419      22 03.0   -09 55 d  Aqr                  eF,  slbM
I1422   Gx 22 03.0   +02 37 z  Peg          16.  p vF,  eS,  lbM,  bet  2  st  13.5
 7185   Gx 22 03.1   -20 28 r  Aqr          14.  p vF,  pL,  iR,  vglbM,  f  of  2
 7190   Gx 22 03.1   +11 12 r  Peg          15.  p eF,  vS,  iR,  lbM
I1421   Gx 22 03.1   -09 57 m  Aqr    0.3   15.  p neb  *14
I1423   Gx 22 03.2   +04 18 u  Peg    1.1   15.  p F,  vS,  R,  gvlbM
I1424   Gx 22 03.2   +11 13 u  Peg    1.0   15.  p eF,  vS,  1'  f  7190
I5160   Gx 22 03.2   +10 56 u  Peg    1.1   15.  p F,  vS,  R
 7189   Gx 22 03.3   +00 34 r  Aqr          14.  p F,  S,  lE
I1427      22 03.3   +15 07 d  Peg                  vF,  vS
I5156   Gx 22 03.3   -33 50 s  PsA          13.  p pF,  pS,  R
 7195   Gx 22 03.4   +12 39 r  Peg          15.  p eeF,  R,  v  diffic
I1425   Gx 22 03.4   +02 37 z  Peg          15.  p F,  lE  pf,  r,  D?
I5157   Gx 22 03.4   -34 56 c  PsA    2.1          pB,  pS,  R,  3  st  in  line  nf
 7188   Gx 22 03.5   -20 20 r  Aqr          14.  p eF,  pS,  E,  lbM
 7194   Gx 22 03.5   +12 37 r  Peg          14.  p vF,  vS,  R,  lbM
 7193     - 22 03.6   +10 49 r  Peg                  Cl,  lRi,  lC,  st  9...10
I1426      22 03.9   -09 55 d  Aqr                  F,  S,  iF,  lbM
I1428   Gx 22 04.4   +02 38 z  Peg          16.  p vF,  S,  R,  *14  nr
I5154      22 04.6   -66 07 d  Ind                  vF,  bM
 7179   Gx 22 04.8   -64 03 v  Ind    1.8           cF,  pS,  vgbM
 7209   OC 22 05.2   +46 30 s  Lac   25.     6.7   Cl,  L,  cRi,  pC,  st  9...12
 7198   Gx 22 05.3   -00 39 r  Aqr          15.  p eF,  vS,  stellar
 7206   Gx 22 05.6   +16 47 r  Peg          15.  p F,  S,  lE,  bM
I5161      22 05.6   +09 34 d  Peg                  F,  R,  stell,  r
 7207   Gx 22 05.7   +16 45 r  Peg                  vF,  S
I5163      22 05.8   +27 05 d  Peg                  eF,  2  st  13  nr
 7196   Gx 22 06.0   -50 07 s  Ind    1.9   11.5   cB,  S,  R,  am  st
I5164      22 06.0   +27 03 d  Peg                  eF,  stell
I5166      22 06.1   +27 04 d  Peg                  eF,  stell  N,  or  vS  Cl
 7211   Gx 22 06.2   -08 07 r  Aqr                  eF,  S,  stellar
 7210     - 22 06.3   +27 06 r  Peg                  eF,  R,  bN,  vF  D*  np
I5158   Gx 22 06.4   -67 31 c  Ind    1.1           eeF,  eS,  bM
 7201   Gx 22 06.5   -31 16 s  PsA    1.7   14.  p F,  R,  gbM,  1st  of  4
 7202   Gx 22 06.7   -31 12 m  PsA    1.3   13.  p eF,  S,  stellar,  2nd  of  4
 7203   Gx 22 06.7   -31 10 s  PsA    1.9   13.  p cF,  R,  stellar,  3rd  of  4
 7192   Gx 22 06.8   -64 19 s  Ind    2.5   12.  p pB,  S,  R,  pmbM
 7191   Gx 22 06.9   -64 38 v  Ind                  vF,  S,  lE,  vgbM
 7204   Gx 22 06.9   -31 03 s  PsA          14.  p pB,  L,  lE,  gbM,  4th  of  4
I1429      22 06.9   +10 06 d  Peg                  neb  susp  close  to  *11
 7212   Gx 22 07.0   +10 14 r  Peg          15.  p eF,  vS,  lE
 7200   Gx 22 07.2   -50 00 v  Ind    1.6           pF,  S,  R,  smbM
I5167    * 22 07.5   -08 08 F  Aqr                  vF,  neb?
I1431      22 07.7   -13 30 F  Aqr                  eF,  v  diffic,  F*  np
 7217   Gx 22 07.9   +31 22 s  Peg    3.7   10.2   B,  pL,  gbM,  er
I5162      22 08.1   -52 43 d  Ind                  eF,  eS,  vE  95deg
 7208   Gx 22 08.4   -29 06 r  PsA          14.  p vF,  vS,  R,  almost  PN
 7199   Gx 22 08.5   -64 42 v  Ind    1.3           vF,  S,  R,  pslbM,  *11  p  3'
 7205   Gx 22 08.5   -57 25 s  Ind    4.3   11.  p pB,  L,  cE,  gpslbM
I1430      22 08.5   -13 34 d  Aqr                  F,  S,  vlbM,  diffic
 7215   Gx 22 08.6   +00 30 r  Aqr          15.  p vF,  S,  E
I5168   Gx 22 08.8   -27 51 c  PsA    1.3           eeF,  vS,  mE,  2  F  st
 7214   Gx 22 09.1   -27 49 s  PsA    1.9   12.4   glob.  cl.  ,  pL,  iR,  rr
 7213   Gx 22 09.3   -47 10 s  Gru    1.9   10.5   vB,  pS,  R,  gbM
I5172   Gx 22 09.9   +12 49 z  Peg          16.  p vF,  vS,  stell,  *14  att
I1432      22 10.1   +03 41 d  Peg                  vF,  vS,  sbM  *14,  *13.5  nr
I5165   Gx 22 10.1   -64 35 c  Tuc    1.4           eF,  eS
 7218   Gx 22 10.2   -16 40 s  Aqr    2.5   12.1   pB,  lE,  r
 7223   Gx 22 10.2   +41 00 r  Lac          13.  p eF,  pS,  lE,  r,  am  3  st
I5169   Gx 22 10.2   -36 05 c  PsA    2.2           eF,  eS,  stell  N,  spir  or  oval
 7226   OC 22 10.5   +55 25 s  Cep    2.     9.6   pB,  L,  in  cluster
I1434   OC 22 10.5   +52 50 s  Lac    8.     9.  p fine  Cl,  6  branches,  st  12-15m
I5171   Gx 22 10.9   -46 05 c  Gru    2.8           no  descr
 7222   Gx 22 11.0   +02 05 r  Aqr          15.  p vF,  S
I5180   Gx 22 11.1   +38 55 u  Lac    1.1   15.  p vF,  S,  sbM
 7221   Gx 22 11.3   -30 37 s  PsA    2.2   12.  p F,  S,  R,  gbM,  r,  2  vS  st  nr
 7220   Gx 22 11.5   -22 58 r  Aqr          15.  p eF,  vS,  vlE,  gbM,  *10  n  3'
 7227   Gx 22 11.5   +38 42 r  Lac          15.  p vF,  vS,  R,  lbN,  np  of  2
 7224   Gx 22 11.6   +25 50 r  Peg          14.  p F,  S,  R
I5177   Gx 22 11.6   +11 48 u  Peg    1.6   15.  p F,  S,  E  ns,  glbM
 7228   Gx 22 11.8   +38 41 r  Lac          15.  p F,  vS,  R,  lbM,  sf  of  2
 7234     - 22 12.1   +56 58 r  Cep                  Cl,  S,  P,  lC
I1433   Gx 22 12.2   -12 46 m  Aqr    0.4   15.  p F,  S,  E  pf,  bM
 7231   Gx 22 12.4   +45 19 r  Lac          14.  p eF,  S,  er
I5170   Gx 22 12.5   -47 13 c  Gru    1.8           no  descr
I5178   Gx 22 12.5   -22 57 c  Aqr    1.4           eF,  vS,  7220  p  63s
 7216   Gx 22 12.6   -68 40 c  Ind    1.4           pF,  S,  R,  gbM
 7235   OC 22 12.6   +57 17 s  Cep    4.     7.7   Cl,  pC,  has  a  ruby  *10
I5174   Gx 22 12.7   -38 10 c  Gru    0.8           eF,  eS,  cE  150deg
I5175      22 12.7   -38 08 d  Gru                  eF,  eS,  R,  bM
 7219   Gx 22 13.1   -64 51 s  Tuc    2.4   13.  p pB,  S,  R,  2  st  nr
 7225   Gx 22 13.2   -26 09 r  PsA          13.  p pF,  S,  lE,  bM
I5181   Gx 22 13.4   -46 02 s  Gru    2.8   11.7   no  descr
I1435   Gx 22 13.5   -22 06 m  Aqr    0.9   14.  p F,  S
I1436   Gx 22 13.9   -10 11 m  Aqr    0.2   15.  p eF,  vS,  R,  vSN
 7229   Gx 22 14.0   -29 25 s  PsA    1.8   12.  p F,  pL,  R,  vglbM
 7230   Gx 22 14.3   -17 04 r  Aqr          14.  p vF,  S,  R,  bM
 7236   Gx 22 14.7   +13 51 s  Peg    1.0   13.5   vF,  S,  stellar
 7237   Gx 22 14.8   +13 50 s  Peg    1.0   13.7   vF,  S,  stellar
I5173   Gx 22 14.8   -69 22 c  Ind    1.6           eF,  S,  mE  75deg
 7239   Gx 22 14.9   -05 05 r  Aqr                  eF,  vS
I5176   Gx 22 14.9   -66 51 c  Tuc    4.7           vF,  S,  eE  30deg  ,  *  n
I5191   Gx 22 15.0   +37 18 x  Lac    0.8           one  of  6  neb  incl  7240,  7242,  &  IC  5195
I5192   Gx 22 15.2   +37 16 x  Lac    0.2           another  of  group  of  6
 7238     - 22 15.3   +22 30 r  Peg                  pF,  S,  R,  mbM,  4  st  p
 7243   OC 22 15.3   +49 53 s  Lac   21.     6.4   Cl,  L,  P,  lC,  st  vL
 7245   OC 22 15.3   +54 20 s  Lac    5.     9.2   Cl,  C,  st  eS
I1441   Gx 22 15.3   +37 18 v  Lac    0.9           eF,  S,  S  stellar  N
 7240   Gx 22 15.4   +37 17 s  Lac    0.8   13.8   eF,  eS,  *  att  n,  p  of  2;  =  IC  1441
I5183      22 15.4   -35 50 d  PsA                  pB,  cS,  F*  att  sf
 7232   Gx 22 15.7   -45 51 s  Gru    3.0   13.  p pB,  S,  pmE,  psbM,  p  of  2
 7242   Gx 22 15.7   +37 18 s  Lac    2.6   12.0   vF,  S,  lbM,  f  of  2
I1437   Gx 22 15.7   +02 03 u  Aqr    1.1   15.  p pB,  vS,  R,  mbM
I5193   Gx 22 15.7   +37 15 x  Lac                  another  of  group  of  6
I5195   Gx 22 15.7   +37 18 x  Lac                  eF,  S,  0'.5  s  of  7242
 7233   Gx 22 15.8   -45 51 s  Gru    2.2           F,  vS,  R,  *8  f,  f  of  2
 7241   Gx 22 15.8   +19 14 s  Peg    3.5   14.  p pF,  lE,  *10  att  s
I5179   Gx 22 16.1   -36 50 s  Gru    2.3   11.9   vF,  L,  R,  *  nr  s;  B*  sp
I5182      22 16.1   -65 27 d  Tuc                  eF,  eS,  bM

I5184   Gx 22 16.1   -36 51 c  Gru    2.6           pF,  pS,  lE,  bet  2  st  ns;  =  IC  5179
I5189    * 22 16.2   -05 00 F  Aqr                  eF*;  nebs?
 7244   Gx 22 16.4   +16 28 v  Peg    0.7   14.4   eF,  eS,  R,  bM
I1438   Gx 22 16.5   -21 26 c  Aqr    2.4           F,  biN
I1440   Gx 22 16.5   -16 00 m  Aqr    0.6   15.  p F,  S,  stellar
I1442   OC 22 16.5   +54 03 s  Lac          9.1   Cl  of  neb  stars
I1439   Gx 22 16.7   -21 29 c  Aqr    1.8           vF,  S,  vlbM
 7248   Gx 22 16.9   +40 30 s  Lac    2.1   14.  p vF,  vS,  mbM
I5194   Gx 22 17.1   -15 57 x  Aqr    0.2           eF  (not  found  again)
 7246   Gx 22 17.5   -15 32 r  Aqr          15.  p vF,  S,  vlE,  vgbM,  *13  n
I5198      22 17.7   -15 40 d  Aqr                  eF,  pL,  R,  bM,  r
 7247   Gx 22 17.8   -23 43 r  Aqr          13.  p pF,  vS,  R,  lbM,  B  D*  p  13s
I5185      22 17.8   -65 51 d  Tuc                  eF,  vS,  bM
 7250   Gx 22 18.3   +40 35 r  Lac          13.  p vF,  S,  mE  165deg  +/-
I5187      22 18.3   -59 37 d  Tuc                  vS,  R,  disc,  mag  14.5
I5188   Gx 22 18.4   -59 38 c  Tuc    1.5           F,  cS,  R,  cbM
I5186   Gx 22 18.8   -36 48 c  Gru    1.5           eeF,  S,  R,  F*  nr  p
I5190   Gx 22 19.0   -59 53 c  Tuc    1.6           vF,  2-br  spir,  *15  in  M
I1443   Gx 22 19.1   -20 56 c  Aqr    1.7           pB,  S,  iF,  mbM
 7253   Gx 22 19.4   +29 24 r  Peg          14.  p vF,  pE
I5199   Gx 22 19.5   -37 32 c  Gru    1.6           eF,  eS,  cE  160deg
I5197   Gx 22 19.8   -60 08 c  Tuc    1.3           bM,  mag  15
I5196      22 20.2   -65 24 d  Tuc                  eF,  eeS,  eE  105deg  ,  stell  N
 7251   Gx 22 20.4   -15 46 r  Aqr          13.  p F,  pS,  R,  gpmbM
 7261   OC 22 20.4   +58 05 s  Cep    6.     8.4   Cl,  L,  pRi,  lC
 7249   Gx 22 20.5   -55 08 c  Gru    1.1           eeF,  R,  doubtful  object
 7252   Gx 22 20.7   -24 41 s  Aqr    2.2   12.1   F,  S,  R,  er
I5204      22 20.7   -14 24 d  Aqr                  vF,  vmE
I5201   Gx 22 21.4   -46 04 s  Gru    8.5   11.  p no  descr
 7263   Gx 22 21.8   +36 21 v  Lac    0.8           F,  S,  R
 7255     - 22 21.9   -15 33 r  Aqr                  eF,  L,  mE  30deg  ,  sbMN
 7254      22 22.0   -21 44 D  Aqr                  vF,  vS,  R,  *11  p  4'.5;  =  7256
 7257     - 22 22.2   -04 01 r  Aqr                  F,  vS,  lE
 7264   Gx 22 22.2   +36 24 r  Lac          14.  p vF,  pS,  mE
I1444   Gx 22 22.3   +05 08 u  Peg    1.1   16.  p F,  S,  iF,  mbN,  vF*  close
I5200      22 22.3   -65 45 d  Tuc                  eeF,  eS,  R,  F*  np  1'
 7265   Gx 22 22.4   +36 14 r  Lac          13.  p F,  vS,  R,  mbM
I5210   Gx 22 22.5   -18 52 c  Aqr    1.6           eeF,  vS,  R,  p  of  2
I5203   Gx 22 22.6   -59 46 c  Tuc    1.6           bM,  mag  15
 7256   Gx 22 22.7   -21 44 r  Aqr          14.  p 3  F  st  in  F  neb
 7260   Gx 22 22.7   -04 07 r  Aqr          14.  p eF,  pS,  iR
I5211      22 22.7   -18 53 d  Aqr                  eF,  S,  f  of  2
I5205      22 22.8   -59 48 d  Tuc                  bM,  mag  16
I5202   Gx 22 22.9   -65 48 c  Tuc    1.4           !  eF,  vS,  stell  N,  spir
 7258   Gx 22 23.0   -28 22 r  PsA          14.  p vF,  S,  E,  glbM;  biN?
 7259   Gx 22 23.1   -28 59 v  PsA                  eF,  pL,  R,  vlbM
I5209      22 23.1   -37 59 d  Gru                  F,  eS,  R,  2  st  np
 7262   Gx 22 23.4   -32 20 r  PsA                  eF,  S,  R,  lbM
I5207   Gx 22 23.5   -60 34 c  Tuc    1.6           bM,  mag  16
I5212   Gx 22 23.5   -38 02 c  Gru    1.4           eF,  eS,  cE  40deg
 7270   Gx 22 23.6   +32 24 r  Peg          15.  p vF,  S,  E
I5214      22 23.7   -27 28 d  PsA                  eF,  pS,  R,  *8  p
 7271   Gx 22 23.8   +32 22 r  Peg          15.  p vF,  S,  vlE
I5217   Pl 22 23.9   +50 58 s  Lac    0.1   13.  p PN  ,  stellar
 7266   Gx 22 24.1   -04 04 r  Aqr          15.  p F,  vS,  R,  alm  stellar
 7273   Gx 22 24.1   +36 13 r  Lac          15.  p F,  vS,  R,  mbM
 7275   Gx 22 24.1   +32 27 r  Peg          15.  p eF,  S,  mE
I5206   Gx 22 24.1   -66 51 c  Tuc    1.2           eF,  vS,  R,  stell  N
 7274   Gx 22 24.2   +36 08 s  Lac    1.8   14.  p pF,  vS,  mbM
 7276   Gx 22 24.2   +36 06 r  Lac          15.  p vF,  vS,  mbM
 7267   Gx 22 24.3   -33 41 r  PsA                  cB,  pS,  vlE,  glbM,  B***  sp
 7272   Gx 22 24.5   +16 36 r  Peg          15.  p vF,  S,  iR
I5208   Gx 22 24.6   -65 14 c  Tuc    1.3           eeF,  eS,  eE  65deg  ,  stell  N
 7281   OC 22 24.7   +57 50 s  Cep                  Cl,  L,  pRi,  lC,  st  10...16
I5216      22 24.7   -18 05 d  Aqr                  vF,  S,  R,  N
I5213      22 25.0   -60 29 d  Tuc                  bM,  mag  16
I1445   Gx 22 25.5   -17 15 c  Aqr    2.1           pF,  vS,  gbMN
 7268   Gx 22 25.7   -31 12 c  PsA    1.8           F,  cS,  vlE,  p  of  2
 7269   Gx 22 25.8   -13 09 r  Aqr          14.  p eF,  pS,  R,  glbM
 7282   Gx 22 26.0   +40 19 r  Lac          15.  p eF,  pL,  dif,  bet  3  st
 7277   Gx 22 26.4   -31 10 r  PsA          14.  p F,  cS,  vlE,  f  of  2
 7280   Gx 22 26.5   +16 09 s  Peg    2.4   13.  p F,  cS,  R,  gbM  S*,  3  st  n,  nf
I5215      22 27.0   -65 56 d  Tuc                  eF,  vS,  R,  *  2'  nf;  susp
 7279   Gx 22 27.1   -35 08 r  PsA                  vF,  pS,  R,  vgvlbM
 7286   Gx 22 28.0   +29 07 r  Peg          13.  p vF,  S,  R,  am  st
I5218   Gx 22 28.1   -60 24 c  Tuc    1.4           F,  pS,  E  195deg
 7296   OC 22 28.2   +52 17 s  Lac    4.    10.  p Cl,  iR,  lC,  st  vS
I5220      22 28.2   -59 43 d  Tuc                  F,  pS,  E  105deg
 7288   Gx 22 28.3   -02 51 r  Aqr          14.  p vF,  eS,  stellar
 7278   Gx 22 28.4   -60 10 c  Tuc    0.9           eeF,  lE,  vgvlbM,  3  st  sf
 7290   Gx 22 28.4   +17 09 s  Peg    1.8   14.  p pB,  S,  pmE
 7292   Gx 22 28.4   +30 18 s  Peg    2.1   13.  p eF,  S,  oval,  F*  inv
 7295     - 22 28.4   +52 50 r  Lac                  Cl,  P,  lC,  st  12....13
 7291   Gx 22 28.5   +16 47 r  Peg          15.  p eF,  eS,  R,  smbM
 7283   Gx 22 28.6   +17 30 r  Peg          15.  p vF,  vS,  R
 7284   Gx 22 28.6   -24 51 r  Aqr          13.  p cF,  cS,  lE,  r
 7285   Gx 22 28.7   -24 51 r  Aqr          13.  p neb*  at  pos  60deg  ,  dist  40",  from  7284
I5219      22 28.7   -65 52 d  Tuc                  eF,  eS,  cE  15deg  ,  susp
 7287   Gx 22 28.8   -22 12 c  Aqr    0.7           eF,  slightly  nebs  D*
I5221      22 28.9   -65 53 d  Tuc                  eF,  bM,  susp
I1446      22 29.1   -01 12 d  Aqr                  vF,  stellar
 7289   Gx 22 29.2   -35 27 r  PsA                  vF,  S,  R,  gbM
 7293   Pl 22 29.6   -20 48 s  Aqr   12.8           !  pF,  vL,  E  or  biN
I5223   Gx 22 29.8   +07 58 u  Peg    1.1   16.  p F,  vS,  dif,  r
I5222   Gx 22 29.9   -65 40 c  Tuc    1.7           !  eF,  pS,  stell  N,  susp
I1447      22 30.0   -05 09 D  Aqr                  eeF,  pS,  R,  *9.0  n  3'
 7301   Gx 22 30.4   -17 34 r  Aqr          14.  p vF,  pS,  lE,  lbM
I5224   Gx 22 30.5   -46 00 c  Gru    1.4           no  descr
 7298   Gx 22 30.8   -14 11 s  Aqr    1.5   14.  p vF,  pL,  iR
 7297   Gx 22 30.9   -37 49 r  Gru                  eF,  S,  R,  p  of  2
 7300   Gx 22 31.0   -14 00 s  Aqr    2.2   12.9   vF,  pL,  E  150deg  ,  vglbM
I5239   Gx 22 31.1   -38 02 c  Gru    1.6           vF,  pS,  R
 7299   Gx 22 31.4   -37 49 r  Gru                  eF,  S,  R,  f  of  2
 7304     - 22 31.5   +30 58 r  Peg                  vF,  pS,  vlbM,  nf  7303(?)
I5225      22 31.5   -25 22 d  PsA                  eeF,  pS,  R,  bet  2  st
 7303   Gx 22 31.6   +30 58 r  Peg          13.  p vF,  S,  R,  gvlbM
I5226      22 31.7   -24 40 d  Aqr                  eeF,  pL,  R
 7294   Gx 22 32.2   -25 23 r  PsA          14.  p vF,  vS,  R
 7305   Gx 22 32.2   +11 43 r  Peg          15.  p eF,  S,  R,  4  F  st  around
 7302   Gx 22 32.4   -14 07 s  Aqr    1.9   12.1   F,  pS,  R,  vsbMSN;  =  IC  5228
I5228   Gx 22 32.4   -14 08 t  Aqr    1.9   13.  p pB,  pS,  R,  B*  s;  =  7302
 7306   Gx 22 33.5   -27 14 r  PsA          13.  p vF,  S,  lE,  *11  p
 7307   Gx 22 33.8   -40 57 s  Gru    4.2   13.  p F,  pL,  pmE
I5231   Gx 22 34.0   +23 21 m  Peg    0.4   15.  p F,  S,  R,  gbMN
I5227   Gx 22 34.1   -64 42 c  Tuc    1.5           F,  S,  stell  N
 7311   Gx 22 34.2   +05 35 r  Peg          13.  p pF,  S,  R,  psbM,  r
 7309   Gx 22 34.3   -10 21 s  Aqr    2.1   12.5   vF,  pL,  R,  glbM,  r
 7308   Gx 22 34.5   -12 56 r  Aqr          14.  p pB,  vS,  R;  =  IC  1448
I1448   Gx 22 34.6   -12 56 m  Aqr    1.0   14.  p vF,  vS,  diffic
 7310   Gx 22 34.7   -22 29 r  Aqr          14.  p vF,  pS,  R,  bMN
 7312   Gx 22 34.7   +05 49 r  Peg          14.  p F,  S
I5229      22 34.8   -61 23 d  Tuc                  bM,  mag  15
I1449      22 35.1   -08 47 d  Aqr                  F,  S,  iF,  bM,  r
 7315   Gx 22 35.4   +34 50 r  Peg          14.  p vF,  eS,  R,  bM
 7313   Gx 22 35.5   -26 06 v  PsA                  eF,  E
I5230      22 35.6   -61 32 d  Tuc                  eF,  eS,  cE  35deg  ,  cbM
 7314   Gx 22 35.8   -26 03 s  PsA    4.6   10.9   cF,  L,  mE  0deg  ,  vlbM
 7316   Gx 22 35.9   +20 19 s  Peg    1.3   14.  p F,  S,  R,  *8  sp
 7317   Gx 22 35.9   +33 57 s  Peg    1.0   13.6   vF,  vS
 7318   Gx 22 36.0   +33 58 s  Peg    1.9   13.1   eF,  eS
 7319   Gx 22 36.1   +33 59 s  Peg    1.7   13.1   eF,  eS
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 7320   Gx 22 36.1   +33  57  s   Peg     2.2   12.7   F, vS
 7321   Gx 22 36.4   +21  38  r   Peg           14.  p F, S,  iR,  vgvlbM
I5233   Gx 22 36.6   +25  46  u   Peg     1.1   15.  p F, vS, dif,  *12.5  v close
 7323   Gx 22 36.8   +19  09  r   Peg           14.  p pF,  pL,  iR
 7325   D* 22 36.8   +34  22  A   Peg                F, vS,  7331  f
 7326   D* 22 36.8   +34  25  A   Peg                eF,  eS,  7331  f
 7327    * 22 36.8   +34  29  r   Peg                eF,  eS,  np  7331
 7330   Gx 22 36.9   +38  33  r   Lac           13.  p pB,  S,  lE,  bM
 7324   Gx 22 37.0   +19  09  r   Peg           15.  p vF,  vS,  neb*
 7331   Gx 22 37.1   +34  25  s   Peg    10.7    9.5   B,  pL,  pmE  163deg  , smbM
 7333   Gx 22 37.2   +34  26  h   Peg     0.1   15.  p vF,  vS,  p  7335
 7336   Gx 22 37.2   +34  29  r   Peg           15.  p eF,  vS
 7335   Gx 22 37.3   +34  27  s   Peg     1.7   15.  p vF,  vS
 7332   Gx 22 37.4   +23  48  s   Peg     4.2   11.0   cB,  S,  mE  156deg  , smbMN,  p of 2
 7337   Gx 22 37.4   +34  22  v   Peg     1.3          eF,  S,  stellar
 7328   Gx 22 37.5   +10  32  r   Peg           14.  p eF,  pS,  lE  90deg  , vglbM
 7338   Gx 22 37.5   +34  25  h   Peg     0.2   14.  p eF,  eS,  sf  7335
 7340   Gx 22 37.6   +34  26  r   Peg           15.  p vF,  vS
 7322   Gx 22 37.7   -37  13  r   Gru                vF,  S,  vlE,  gbM
 7334   Gx 22 37.8   -37  14  c   Gru                eeF;  = 7322
 7339   Gx 22 37.8   +23  47  s   Peg     3.0   12.1   F,  pS,  mE  89deg  , vglbM,  f of 2
I5232      22 37.8   -68  52  d   Ind                eF,  eeS,  bM
I1450    * 22 38.0   +34  33  x   Peg                vF,  eS,  stellar
 7342   Gx 22 38.1   +35  31  r   Peg           15.  p eF,  vS
 7343   Gx 22 38.6   +34  04  s   Peg     1.2   13.4   eF,  vS,  R,  lbM,  S* inv
 7345   Gx 22 38.6   +35  33  r   Peg           15.  p eF,  vS
 7341   Gx 22 39.2   -22  41  r   Aqr           13.  p pF,  pS,  E,  lbM
 7346   Gx 22 39.5   +11  05  r   Peg           15.  p eF,  vS,  stellar
 7353   Gx 22 39.5   +11  47  r   Peg           15.  p eF
 7344   Gx 22 39.7   -04  10  r   Aqr           14.  p pF,  vS,  R
 7352    - 22 39.7   +57  24  r   Cep                Cl,  vL,  pRi,  vlC
 7347   Gx 22 39.9   +11  02  r   Peg           14.  p eF,  pL,  E
I5234      22 40.2   -65  48  d   Tuc                eF,  eeS,  cE  165deg  , cbM
 7354   Pl 22 40.4   +61  17  s   Cep     0.3   13.  p PN ,  B,  S,  R,  pgvlbM
 7329   Gx 22 40.5   -66  28  s   Tuc     4.2   12.  p pB,  pS,  mE  90deg
 7348   Gx 22 40.6   +11  54  s   Peg     1.3   15.  p vF,  pL,  iR
 7350    * 22 41.0   +11  58  r   Peg                vF
I5242   Gx 22 41.2   +23  24  u   Peg     1.0   15.  p F,  S,  R,  gbM,  *13  nf
 7351   Gx 22 41.3   -04  27  r   Aqr           13.  p pF,  pS,  mE  180deg  , bM,  r
I5235      22 41.4   -66  34  d   Tuc                eeF,  bM
I5243   Gx 22 41.4   +23  23  v   Peg     0.7          F,  cS,  iF,  dif
 7349      22 41.5   -22  54  d   Aqr                eF,  vS,  E  175deg  , biN,  bn
I5236      22 41.5   -66  36  d   Tuc                eF,  eeS,  cE  60deg  , bM
I5238      22 41.5   -60  45  d   Tuc                F,  vS,  vlE
I5241   Gx 22 41.5   +02  38  u   Aqr     1.0   15.  p pB,  cS,  R,  gbM,  r
I5240   Gx 22 41.9   -44  48  s   Gru     3.2   12.  p pF,  pL,  R,  F* sf
 7356   Gx 22 42.1   +30  43  r   Peg           15.  p eF,  pS,  R,  glbM,  * att
 7361   Gx 22 42.3   -30  03  s   PsA     3.5   12.5   F,  pL,  vmE  0deg  , vgvlbM
I5237   Gx 22 42.3   -30  03  c   PsA     4.0          eeF,  eS,  eE,  *8  np;  = 7361
 7357   Gx 22 42.4   +30  11  r   Peg           15.  p vF,  vS,  vF*  inv
I1454   Pl 22 42.6   +80  27  s   Cep     0.6   15.  p vF,  S,  *7  4'  f
 7363   Gx 22 43.3   +34  00  s   Peg     1.1   15.  p pF,  pL,  E,  D*  f
 7355    - 22 43.4   -37  52  r   Gru                eeF,  S,  R,  D*  f  40s
 7360   Gx 22 43.6   +04  09  r   Peg           14.  p eF,  vS
 7362   Gx 22 43.9   +08  43  r   Peg           15.  p vF,  S,  R,  lbM
I5244   Gx 22 44.2   -64  03  c   Tuc     3.3          eF,  pS,  eE  0deg  , stell  N
 7366   Gx 22 44.3   +10  46  r   Peg           15.  p eF,  S,  stellar
 7369   Gx 22 44.3   +34  21  r   Peg           15.  p pF,  bet  2  F st
 7364   Gx 22 44.5   -00  07  r   Aqr           14.  p F,  S,  R,  psbM
 7367   Gx 22 44.7   +03  41  r   Peg           15.  p vF,  pS,  lE
I5248      22 44.7   -00  21  d   Aqr                susp  (13.5  mag)
 7359      22 44.8   -23  41  D   Aqr                pF,  vS,  pmE,  bMN
 7365   Gx 22 45.0   -19  59  r   Aqr           14.  p vF,  eS,  R,  gbMN,  *11  nf  4'
I5245      22 45.1   -65  20  d   Tuc                eF,  eS,  R,  F*  np  0'.5
I5251    * 22 45.1   +11  09  x   Peg                eF
I5253   Gx 22 45.4   +21  49  u   Peg     1.0   15.  p F,  S,  E  ns,  *13.5  nr
 7370   Gx 22 45.5   +11  03  r   Peg                eF,  vS
 7368   Gx 22 45.6   -39  20  v   Gru     3.2          F,  cS,  lE,  glbM
 7358   Gx 22 45.7   -65  07  r   Tuc                F,  S,  R,  bM,  stell  N with  wisps  175deg
 7372   Gx 22 45.7   +11  08  r   Peg           14.  p F,  S,  iR
I5255      22 45.8   +36  14  d   Lac                F,  S,  R,  gbM
I1452      22 45.9   +16  51  d   Peg                vF,  vS,  quite  stellar
 7374   Gx 22 46.0   +10  51  r   Peg           15.  p vF,  pL,  R
I5254      22 46.0   +21  07  d   Peg                F,  vS,  R,  r,  *14  att  sf,  7375  f
 7371   Gx 22 46.1   -11  00  s   Aqr     2.1   12.1   vF,  pL,  R,  lbM
I1451   Gx 22 46.2   -10  22  m   Aqr     0.4   15.  p vF,  S,  dif,  vS,  excent  N
 7373   Gx 22 46.5   +03  13  r   Peg           15.  p F,  vS,  bM,  stellar
 7375   Gx 22 46.6   +21  05  r   Peg           15.  p eF,  vS,  R
I5246      22 46.6   -64  54  d   Tuc                eF,  eS
I1453   Gx 22 46.8   -13  27  m   Aqr     0.6   15.  p pB,  pL,  R
I5247      22 46.9   -65  17  d   Tuc                vF,  vS,  mE  125deg  , mbM
 7380  C+N 22 47.0   +58  06  s   Cep    25.     7.2   Cl,  pL,  pRi,  lC,  st  9...13
I5249   Gx 22 47.1   -64  50  c   Tuc     3.7          eF,  vS,  eE  15deg  , vlbM
I5250   Gx 22 47.3   -65  03  c   Tuc     3.8          cB,  S,  R,  F*  f  0'.5
 7376   Gx 22 47.4   +03  40  r   Peg           15.  p eF,  vS,  R
 7379   Gx 22 47.4   +40  14  r   Lac           14.  p eF,  S,  R,  lbM
 7377   Gx 22 47.8   -22  19  s   Aqr     2.2   11.6   pB,  S,  vlE,  vgmbM,  *12  p
 7378   Gx 22 47.9   -11  49  r   Aqr           13.  p vF,  pL
I5252   Gx 22 48.1   -68  54  c   Ind     1.2          F,  S,  R,  cbM
 7383   Gx 22 49.6   +11  36  s   Peg     1.0   13.9   vF,  vS,  R,  7385  nf
 7384   Gx 22 49.7   +11  33  r   Peg                eF,  5'  nf  7383
I5256   Gx 22 49.8   -68  42  c   Ind     1.1          vF,  vS,  cE  25deg  , cbM
 7385   Gx 22 49.9   +11  36  s   Peg     1.6   12.3   cF,  S,  R,  glbM,  *11  np
 7381   Gx 22 50.0   -19  43  r   Aqr           15.  p eF,  vS,  R,  gbM
 7386   Gx 22 50.0   +11  42  s   Peg     2.1   12.5   cF,  S,  R,  pgbM,  f of 2
 7388   Gx 22 50.2   +11  44  r   Peg                vF,  *11  f  2'.5
 7382   Gx 22 50.3   -36  51  r   Gru                eF,  vS,  R,  *12  att  np
 7387   Gx 22 50.3   +11  38  s   Peg     0.7   14.0   eF,  vS,  R,  2  st  11  s
 7389   Gx 22 50.3   +11  35  s   Peg     1.3   13.4   vF,  R
 7390   Gx 22 50.3   +11  32  r   Peg           15.  p eF,  s of 7389
 7394    - 22 50.6   +52  10  r   Lac                Cl,  vP
 7391   Gx 22 50.7   -01  31  r   Aqr           13.  p cF,  cS,  R,  sbM  *13,  * np
 7395   Gx 22 51.2   +37  05  r   Lac           15.  p eF,  vS,  R,  bM
I5258   Gx 22 51.5   +23  02  m   Peg     0.4   14.  p F,  vS,  R,  mbM,  r
 7393   Gx 22 51.7   -05  33  s   Aqr     2.0   14.  p vF,  pL,  lE,  vgbM,  r
 7392   Gx 22 51.8   -20  36  s   Aqr     2.0   11.9   pB,  pS,  lE  120deg  , mbM
I5257      22 52.3   -67  26  d   Ind                eF,  eeS,  stell  N
 7396   Gx 22 52.5   +01  06  r   Psc           14.  p pF,  pS,  R,  gbM
 7399   Gx 22 52.7   -09  16  r   Aqr           14.  p eF,  pL
 7405   Gx 22 52.8   +12  35  r   Peg                eF,  S,  R
I5259      22 52.8   +36  43  d   Lac                neb;  D  *9.5  f  2'
 7397   Gx 22 52.9   +01  08  r   Psc           15.  p eF,  vS
 7398   Gx 22 52.9   +01  13  r   Psc           15.  p vF,  pL
 7402   Gx 22 53.0   +01  10  r   Psc           14.  p eF,  vS
 7401   Gx 22 53.1   +01  10  r   Psc                eF,  vS
 7403    * 22 53.1   +01  29  F   Psc                * slightly  nebs?  (prob  not)
 7407   Gx 22 53.3   +32  08  r   Peg           14.  p eF,  vS
 7409   Gx 22 53.7   +20  12  r   Peg           15.  p eF
I1455   Gx 22 53.9   +01  23  u   Psc     1.0   15.  p F,  pS,  R,  2  st  11  nr
 7406   Gx 22 54.0   -06  36  r   Aqr           15.  p F,  S,  lE
 7400   Gx 22 54.3   -45  21  c   Gru     2.5          pF,  lE,  glbM,  vS*  inv
 7404   Gx 22 54.3   -39  19  r   Gru                vF,  S,  R
 7419   OC 22 54.3   +60  50  s   Cep     2.    13.  p Cl,  pRi,  cC
I5260   Gx 22 54.3   -39  19  c   Gru     1.5          eeF,  pS,  R,  *9  sp,  v diffic;  = 7404
I5261   Gx 22 54.4   -20  22  c   Aqr     1.7          eeF,  pL,  R,  v diffic,  *9  p  22s
 7411   Gx 22 54.5   +20  14  r   Peg           15.  p vF,  vS
 7415   Gx 22 54.8   +20  15  r   Peg           15.  p eF
 7410   Gx 22 55.0   -39  40  s   Gru     5.5   10.4   cB,  L,  vmE  43deg  , mbM
 7413   Gx 22 55.1   +13  13  v   Peg           14.1   eeF,  pS,  R,  v diffic,  s of 2
I5262      22 55.2   -33  50  d   PsA                eeF,  pS,  R,  v diffic
 7414   Gx 22 55.3   +13  15  r   Peg                eeF,  S,  R,  v diffic,  n of 2

 7423   OC 22 55.3   +57  08  o   Cep     6.    15.  p vF,  pL,  iF,  er
I1456      22 55.3   -12  43  d   Aqr                vF,  vS
I1457    * 22 55.4   -05  33  x   Aqr                eF,  *10  sf  1'
 7420   Gx 22 55.6   +29  48  r   Peg           15.  p vF,  S
 7416   Gx 22 55.7   -05  30  s   Aqr     3.4   12.3   F,  pL,  pmE,  vgbM
 7412   Gx 22 55.8   -42  39  s   Gru     4.0   11.4   eF,  vL,  *7  nf
 7408   Gx 22 55.9   -63  42  v   Tuc                pB,  pS,  R,  vglbM
 7429   OC 22 55.9   +59  59  s   Cep                Cl,  P,  pC,  st  9...11
 7426   Gx 22 56.1   +36  21  r   Lac           13.  p vF,  cS,  R,  stellar,  D*  p
 7422   Gx 22 56.2   +03  56  r   Psc           14.  p vF,  pS,  vlE
I5268      22 56.2   +36  36  d   Lac                B,  S
 7418   Gx 22 56.6   -37  02  s   Gru     3.3   11.4   cB,  vL,  vlE,  vglbM
I1458   Gx 22 56.8   -07  23  m   Aqr     1.2   14.  p vF,  pL,  dif
 7421   Gx 22 56.9   -37  21  s   Gru     2.2   12.0   cB,  L,  vlE,  gpmbM,  rr
I5264   Gx 22 56.9   -36  33  c   Gru     2.7          vF,  S,  vmE,  sp  of  2
I1460   Gx 22 57.1   +04  41  v   Psc     0.4   14.4   pB,  vS,  mbM
 7427   Gx 22 57.2   +08  30  r   Peg           15.  p F,  S,  *9  sf  4'
I1459   Gx 22 57.2   -36  28  s   Gru           10.0   F,  pS,  com,  N = 12m
I5265   Gx 22 57.2   -36  28  c   Gru     6.0          B,  cL,  R,  bet  2  st  pf,  nf  of  2;  = IC  1459
I5267   Gx 22 57.2   -43  24  s   Gru     5.0   10.5   pB,  S,  R,  mbM
 7424   Gx 22 57.3   -41  04  s   Gru     7.6   11.  p F,  cL,  vlE,  vgmbM
 7425   Gx 22 57.3   -10  57  r   Aqr           15.  p eF,  vlE,  *10  p  4'
 7428   Gx 22 57.3   -01  02  s   Psc     2.6   14.  p F,  vS,  R,  bM
 7430   Gx 22 57.5   +08  48  r   Peg           15.  p eF,  vS
 7438    - 22 57.6   +54  21  r   Cas                Cl,  vL,  E
I5269   Gx 22 57.7   -36  02  s   PsA     2.5   13.  p vF,  pS,  R,  np  of  2
 7417   Gx 22 57.8   -65  02  v   Tuc                pB,  cS,  R,  gpmbM
 7431   Gx 22 57.8   +26  10  r   Peg           15.  p eF,  vS
 7435   Gx 22 57.9   +26  08  r   Peg           15.  p eF,  s  of  7436
I5270   Gx 22 57.9   -35  51  c   PsA     3.2          vF,  pS,  mE,  sf  of  2
 7432   Gx 22 58.0   +13  08  r   Peg           15.  p eF,  S,  R
 7433   Gx 22 58.0   +26  09  r   Peg           14.  p eF,  vS,  p  7436
 7436   Gx 22 58.0   +26  09  r   Peg           14.  p F,  pS,  F*  att  p,  gbM
I5271   Gx 22 58.0   -33  45  s   PsA           13.  p pF,  pS,  mE  145deg  , cbM
 7437   Gx 22 58.2   +14  18  s   Peg     1.9   13.  p eeF,  L,  R,  F*  nr  nf,  v  diffic
I5263   Gx 22 58.2   -69  03  c   Ind     1.2          cF,  S,  R,  * in neb
I5266   Gx 22 58.3   -65  08  c   Tuc     1.5          eF,  vS,  eE,  stell  N
 7434   Gx 22 58.4   -01  11  r   Psc           15.  p vF,  vS,  R,  stellar
 7440   Gx 22 58.5   +35  48  s   And     1.9   15.  p eF,  S,  iR
I5274   Gx 22 58.5   +18  55  u   Peg     1.1   15.  p F,  cS,  R,  gbMN
I1461   Gx 22 58.6   +15  10  v   Peg                eeF,  vS,  R
I1462      22 58.6   +08  24  d   Peg                vF,  eS;  only  a  *?
I5275      22 58.6   +18  52  d   Peg                pF,  vS,  dif
 7439      22 58.7   +29  10  D   Peg                long  patch  of  F  neby
I5276   Gx 22 58.7   +18  49  z   Peg           15.  p F,  S,  E  135deg  , gbM,  r,  bet  2  F st
I1463   D* 22 59.3   -10  32  F   Aqr                only  a  F  D*,  dist  20",  in  a  trapez  of  st  10
 7442   Gx 22 59.4   +15  33  s   Peg     1.2   14.  p pF,  R,  bet  2  st  16,  *13  nf
 7441   Gx 22 59.5   -07  04  r   Aqr           15.  p vF,  pS,  iR,  *10  p;  (decl?)
 7445   Gx 22 59.5   +39  06  r   And           15.  p eF,  vS
I5273   Gx 22 59.5   -37  42  s   Gru     2.9   11.5   vF,  cL,  lE,  4  st  p
 7446   Gx 22 59.6   +39  04  r   And           15.  p eF,  vS,  R,  r
I5272      22 59.6   -65  11  d   Tuc                eF,  vS,  R
 7449   Gx 22 59.7   +39  08  r   And           15.  p vF,  S,  R,  vS*  in  centre
 7443   Gx 23 00.1   -12  48  s   Aqr     1.8   14.  p F,  vS,  vlE,  smbM,  er,  n  of  2
 7444   Gx 23 00.1   -12  50  s   Aqr     2.0   14.  p F,  vS,  vlE,  smbM,  er,  s  of  2
 7448   Gx 23 00.1   +15  59  s   Peg     2.7   11.7   pB,  L,  E  173deg  , vgbM,  *11  f  2'.5
 7447      23 00.4   -10  32  D   Aqr                nonexistent;  only  a  F***   np  place
 7451      23 00.4   +08  25  D   Peg                pF,  pL,  *10-  11  sp  2'
 7455   Gx 23 00.6   +07  17  v   Psc                eF,  pS,  cE,  *10  nf  2'
I5278      23 00.6   -08  08  d   Aqr                eF  (not  verified)
 7450   Gx 23 00.9   -12  56  r   Aqr           13.  p vF,  S
 7457   Gx 23 01.0   +30  09  s   Peg     4.4   10.8   cB,  cL,  lE,  gmbM,  r,  2  S  st  n
 7452   Gx 23 01.1   +06  45  r   Psc           15.  p eeF,  pL,  R,  v  diffic
 7454   Gx 23 01.1   +16  23  s   Peg     2.0   14.  p F,  cS,  lE,  lbM,  *11  p  1'
 7453  *** 23 01.4   -06  21  A   Aqr                B,  vS,  *11  close  np
 7458   Gx 23 01.5   +01  45  r   Psc           14.  p cF,  cS,  psbM
 7459    - 23 01.7   +06  44  r   Psc                eeF,  pL,  R,  * nr
 7461   Gx 23 01.7   +15  35  r   Peg           14.  p vF,  vS,  alm  stellar
 7460   Gx 23 01.8   +02  16  s   Psc     1.3   14.  p eF,  pL,  R
 7463   Gx 23 01.9   +15  59  s   Peg     3.0   13.  p vF,  S,  lE,  p  of  2
 7464   Gx 23 01.9   +15  58  s   Peg     0.7   14.  p vF,  vS,  E,  sf  7463
I5277      23 01.9   -65  12  d   Tuc                vF,  S,  R,  almost  a  *;  susp
 7465   Gx 23 02.0   +15  58  s   Peg     1.6   13.  p vF,  vS,  f  of  2
 7466   Gx 23 02.0   +27  03  r   Peg           14.  p eF,  eS,  bM;  = IC  5281
 7456   Gx 23 02.1   -39  35  s   Gru     5.9   12.  p vF,  L,  mE  34deg  , vglbM
 7467   Gx 23 02.3   +15  33  r   Peg           15.  p eF,  vS
I5281      23 02.4   +27  02  d   Peg                eF,  stell,  *13  sff  2'.5
I5282   Gx 23 02.7   +21  53  u   Peg     1.5   15.  p F,  cS,  iF,  vlbM
 7462   Gx 23 02.8   -40  50  s   Gru     3.7   13.  p cF,  pS,  vmE  5deg  +/-  , *11  np
I1465   OC 23 02.9   +16  35  x   Peg                vF;  vS  Cl?
 7468   Gx 23 03.0   +16  36  s   Peg     1.1   14.  p eF,  vS
I5279   Gx 23 03.0   -69  13  c   Ind     1.8          vF,  vS,  cE  40deg  , stell  N
I1464      23 03.2   -09  00  d   Aqr                F,  r,  D?
 7469   Gx 23 03.3   +08  52  s   Peg     1.8   11.9   vF,  vS,  vsmbM  *12
I5283   Gx 23 03.3   +08  54  s   Peg     0.9   13.8   F,  S,  R,  7469  p  2s  ,  1'  s
I1466      23 03.7   -02  46  d   Psc                pB,  vS,  iF
I5280   Gx 23 03.8   -65  13  c   Tuc     1.7          eF,  vS,  eE  5deg  , stell  N,  bet  2  st;  susp
 7471    - 23 03.9   -22  55  r   Aqr                eF,  vS,  lE  85deg  , sbM,  3  st  10  p  20s
 7473   Gx 23 03.9   +30  10  r   Peg           15.  p vF,  S,  R
 7474   Gx 23 04.0   +20  02  r   Peg           15.  p eF,  vS
 7475   Gx 23 04.1   +20  03  r   Peg           15.  p vF,  S
 7478   Gx 23 04.9   +02  35  r   Psc                eF,  E
 7479   Gx 23 04.9   +12  19  s   Peg     4.1   11.0   pB,  cL,  mE  12deg  , bet  2  st
I1467   Gx 23 04.9   -03  13  m   Psc     0.7   15.  p F,  S,  biN
 7470   Gx 23 05.2   -50  07  c   Gru     1.5          eF,  pL,  R,  glbM,  *11  np
 7476   Gx 23 05.2   -43  07  r   Gru                F,  S,  R,  triangle  with  2  st  7
I1468   Gx 23 05.2   -03  11  m   Psc     0.6   15.  p vF,  vS,  iF,  sbM
I1470   Nb 23 05.2   +60  15  s   Cep    15.          vF,  vS,  stellar  N  north  edge
 7480   Gx 23 05.3   +02  32  r   Psc           15.  p vF,  vS,  vlE,  vgbM
 7472      23 05.7   +03  04  D   Psc                F  neb*;  = 7482
 7477      23 05.7   +03  04  D   Psc                F,  S,  bM  *15,  *17  att  n;  = 7482
 7482   Gx 23 05.7   +03  03  r   Psc           14.  p F,  vS,  stellar
 7481    - 23 05.8   -19  57  r   Aqr                vF,  vS,  R,  gbM
 7483   Gx 23 05.9   +03  32  r   Psc           14.  p vF,  S,  E,  psbM
 7485   Gx 23 06.1   +34  06  r   Peg           14.  p vF,  S,  R,  bM,  *10  p
 7486   Gx 23 06.2   +34  04  r   Peg                vF,  vS,  2'  f  7485
I1469      23 06.5   -13  32  d   Aqr                F,  S,  R,  F*  f
I5284   Gx 23 06.8   +19  07  v   Peg     1.3          F,  cS,  R,  N
 7487   Gx 23 06.9   +28  11  r   Peg           15.  p vF,  S,  R
I5285   Gx 23 06.9   +22  56  v   Peg     1.9          F,  vS,  R,  *9.4  s  1'.5
 7484   Gx 23 07.1   -36  16  r   Scl                pB,  S,  R,  lbM,  *8-9  att  s
 7489   Gx 23 07.4   +23  00  r   Peg           14.  p F,  S,  R
 7490   Gx 23 07.4   +32  22  r   Peg           13.  p vF,  vS,  iR,  lbM
 7488   Gx 23 07.9   +00  56  r   Psc           15.  p vF,  vS,  stellar
 7491   Gx 23 08.1   -05  58  r   Aqr           14.  p vF,  S,  R,  vlbM
 7492   Gb 23 08.4   -15  37  s   Aqr     6.2   11.5   eF,  L,  Cl  of  eF  st
 7493    * 23 08.6   +00  54  F   Psc                vF,  stellar
I1471   Gx 23 08.7   -12  39  m   Aqr     0.7   14.  p pB,  S,  R,  bM
 7494   Gx 23 08.9   -24  22  r   Aqr           15.  p eF,  vS,  stellar
 7495   Gx 23 09.0   +12  04  s   Peg     2.1   15.  p eF,  S,  lE,  *9  nf  nr
 7497   Gx 23 09.1   +18  11  s   Peg     5.0   13.  p vF,  L,  pmE  45deg  , lbM
I1472   Gx 23 09.2   +17  14  m   Peg     0.9   15.  p F,  vS,  bM,  2  st  f
I5287   Gx 23 09.4   +00  45  u   Psc     1.1   15.  p F,  vS,  R,  vlbM
 7496   Gx 23 09.8   -43  26  s   Gru     3.5   11.1   pB,  cL,  lE,  vgbM  *13
 7498   Gx 23 09.8   -24  25  r   Aqr           15.  p vF,  S,  iR
I5286      23 09.8   -68  16  d   Ind                eeF,  eS,  mE  130deg  , 2  st  s,  susp
 7499   Gx 23 10.4   +07  35  s   Psc     1.4   13.8   vF,  vS,  stellar
 7501   Gx 23 10.5   +07  35  s   Psc     0.8   13.8   eF
 7500   Gx 23 10.6   +11  01  r   Peg           15.  p eF,  vS,  R
 7504    * 23 10.6   +14  24  r   Peg                vF,  S,  stellar
 7503   Gx 23 10.7   +07  34  s   Psc     0.9   13.8   vF,  S,  stellar
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 7502   D* 23 10.8   -21  46  r   Aqr                  eF,  vS,  E 290deg  ; F D*?
I5289       23 10.9   -32  33  d   Scl                  S Cl,  st eF,  in neb
I1473   Gx 23 11.1   +29  38  u   Peg     2.1   14.  p F,  pS,  gbM
 7505   Gx 23 11.2   +13  37  r   Peg           15.  p eeF,  eS,  lE,  bet  a  B  &  2  F  st
 7510   OC 23 11.5   +60  34  s   Cep     4.     7.9   Cl,  pRi,  pC,  fan- sh,  st  pB
I5288   Gx 23 11.7   -68  06  c   Ind     1.8          eF,  eS,  alm  *,  susp
 7506   Gx 23 11.8   -02  10  r   Psc           14.  p cF,  vS,  R,  sbM  *15
 7508   Gx 23 11.9   +12  58  r   Peg           15.  p eF,  bM*,  *11  np  2'
 7507   Gx 23 12.1   -28  32  s   Scl     2.6   10.4   pB,  cS,  R,  psvmbM,  *10  np
 7512   Gx 23 12.3   +31  08  r   Peg           14.  p F,  S,  R,  vS*  in  centre
 7509   Gx 23 12.4   +14  37  r   Peg           15.  p vF,  S,  R,  bet  2  st
 7514   Gx 23 12.4   +34  53  r   Peg           13.  p eF,  pL,  iR
 7511   Gx 23 12.5   +13  43  r   Peg           15.  p eeF,  S,  R,  v  diffic,  sev  st  nf
 7519       23 12.7   +10  47  D   Peg                vF,  pL
 7516   Gx 23 12.8   +20  14  r   Peg           14.  p F,  vS,  stellar
I1474   Gx 23 12.8   +05  47  u   Psc     1.1   15.  p F,  R,  pS,  gbM
 7515   Gx 23 12.9   +12  41  r   Peg           14.  p F,  cS,  R,  vglbM,  r
I5290   Gx 23 12.9   -23  28  c   Aqr     1.8          vF,  S,  stell  N
 7518   Gx 23 13.1   +06  19  s   Psc     1.5   14.  p vF,  S,  R
 7513   Gx 23 13.2   -28  22  s   Scl     3.2   11.8   vF,  pL,  E,  gbM
 7517   Gx 23 13.3   -02  07  r   Psc           15.  p vF,  vS,  stellar
 7538   Nb 23 13.5   +61  31  s   Cep   10.           vF,  L,  2  pB  st  inv
 7527   Gx 23 13.6   +24  54  r   Peg           14.  p vF,  vS,  stellar
 7520    - 23 13.7   -23  48  r   Aqr                F,  pS,  bet  2  st;  nonexistent?
 7521   Gx 23 13.7   -01  44  r   Psc           15.  p vF,  pS,  psbM
 7523   Gx 23 13.7   +14  00  r   Peg           15.  p eeF,  E
 7525   Gx 23 13.7   +14  01  s   Peg           15.  p eF,  vS,  vlE,  gbM
I5291   Gx 23 13.7   +09  13  z   Peg           16.  p F,  vS,  R,  N,  stell
 7522    - 23 13.8   -22  54  r   Aqr                eF,  vS,  iR,  *10  nff  3';  nonexistent?
 7524   Gx 23 13.8   -01  45  r   Psc                eF,  vS
I5292   Gx 23 13.8   +13  41  z   Peg           15.  p vF,  S,  slbM
 7526  Ast 23 13.9   -09  12  F   Aqr                eF,  vS
I1475       23 14.0   -28  25  d   Scl                neb  *
 7529   Gx 23 14.1   +08  58  r   Peg           14.  p vF
 7528   Gx 23 14.3   +10  13  r   Peg                F,  S
 7530   Gx 23 14.3   -02  45  r   Psc           15.  p eF,  vS,  alm  stellar
 7535   Gx 23 14.3   +13  35  r   Peg           15.  p eeF,  pS,  R,  v  diffic,  n  of  2
 7536   Gx 23 14.3   +13  26  r   Peg           15.  p eeF,  pS,  R,  am  6  st,  s  of  2
 7532   Gx 23 14.4   -02  42  s   Psc     1.8   15.  p vF,  vS,  lE
 7533   Gx 23 14.4   -02  01  r   Psc           15.  p F,  S,  R
 7539   Gx 23 14.4   +23  40  r   Peg           13.  p F,  S,  R,  psbM
 7534   Gx 23 14.5   -02  39  r   Psc           14.  p eF,  vS,  lE
 7540   Gx 23 14.5   +15  56  r   Peg           15.  p F,  vS,  stellar
 7537   Gx 23 14.6   +04  30  s   Psc     2.3   13.2   vF,  cS,  R,  bN,  sp  of  2
 7543   Gx 23 14.6   +28  19  r   Peg           14.  p vF,  S,  R,  lbM
 7551   Gx 23 14.6   +15  55  r   Peg                neb*  13m
 7541   Gx 23 14.7   +04  32  s   Psc     3.5   11.7   B,  L,  mE  97deg  ,  mbM,  nf  of  2
I5293   Gx 23 14.7   +25  08  z   Peg           16.  p F,  S,  like  D*  in  neb
 7531   Gx 23 14.8   -43  36  s   Gru     3.5   11.3   pB,  S,  lE,  pgbM
 7542   Gx 23 14.8   +10  39  r   Peg           15.  p eF,  eS,  stellar
 7544   Gx 23 15.0   -02  12  r   Psc                eF,  vS
 7547   Gx 23 15.0   +18  58  s   Peg     1.3   15.  p vF,  S,  iR
 7548   Gx 23 15.1   +25  16  r   Peg           14.  p vF,  vS,  *16  p  11s
 7546   Gx 23 15.2   -02  18  r   Psc           14.  p eF,  S,  lE
 7549   Gx 23 15.3   +19  02  s   Peg     2.9   14.  p pF,  pS,  R,  *10-  11  p
 7550   Gx 23 15.3   +18  57  s   Peg     1.7   14.  p cF,  S,  R
 7553   Gx 23 15.3   +19  01  r   Peg                vF,  vS,  R
I1476   OC 23 15.3   +30  33  x   Peg                S Cl?
 7545   Gx 23 15.5   -38  32  r   Gru                F,  S,  vlE,  vgvlbM,  *10  att
I5295   Gx 23 15.5   +25  07  z   Peg           16.  p F,  vS,  R,  N
 7555    - 23 15.6   +12  35  r   Peg                F,  R,  bN,  place  very  rough
 7558   Gx 23 15.6   +18  55  r   Peg           16.  p eeF,  neb*  13m
 7564   Gx 23 15.6   +07  17  v   Psc                vF,  eS,  stellar  N
 7554   Gx 23 15.7   -02  23  r   Psc                eF,  eS,  alm  stell,  7556  f
 7557   Gx 23 15.7   +06  41  r   Psc           15.  p vF,  vS,  p  of  2
I5296   Gx 23 15.7   +25  06  u   Peg     1.0   15.  p F,  S,  R,  *15  att
 7556   Gx 23 15.9   -02  20  r   Psc           14.  p cF,  pL,  R,  B**   f
 7559   Gx 23 15.9   +13  17  r   Peg           14.  p F,  cS,  R,  bM  *16,  np  of  2
 7560   D* 23 16.0   +04  30  r   Psc                F,  vS,  iR,  sp  of  2
 7561       23 16.0   +04  31  D   Psc                eF,  stellar,  nf  of  2
 7562   Gx 23 16.0   +06  41  s   Psc     2.3   11.5   cB,  pS,  iR,  psbM
 7563   Gx 23 16.0   +13  11  r   Peg           14.  p pF,  cS,  R,  sbM  *16,  sf  of  2
I5297   Gx 23 16.0   +25  01  z   Peg           16.  p F,  S,  R,  N
I5298   Gx 23 16.1   +25  33  m   Peg     0.6   15.  p vF,  vS,  dif
 7552   Gx 23 16.2   -42  35  s   Gru     3.5   10.7   B,  S,  mE  90deg  +/-  ,  vsbM  *13
 7567   Gx 23 16.2   +15  52  r   Peg           15.  p eeF,  vS,  E
I5294   Gx 23 16.2   -42  35  c   Gru     3.2          pB,  pS,  R,  *8  p;  =  7552
 7565    * 23 16.3   -00  03  r   Psc                vF
 7568   Gx 23 16.3   +24  29  r   Peg           14.  p eF,  pL,  iR,  sev  st  inv
 7573   Gx 23 16.3   -22  10  r   Aqr           14.  p eF,  S,  iR,  b  np,  *10  p  4'
I5299       23 16.3   +20  51  d   Peg                F,  eS,  *13  close  s
 7566       23 16.6   -02  21  D   Psc                vF,  pS,  E,  er,  3  F  st  inv
I5300   Gx 23 16.6   +20  49  z   Peg           16.  p F,  S,  R,  neb  *15
 7569    - 23 16.8   +10  55  r   Peg                vF,  S,  R,  3  F  st  sf
 7570   Gx 23 16.8   +13  29  r   Peg           14.  p eF,  eS
 7572   Gx 23 16.8   +18  29  r   Peg           15.  p eeF,  alm  stellar
 7574    - 23 16.8   +24  00  r   Peg                pF,  S,  E,  rr
 7571       23 17.2   +18  59  D   Peg                vF,  cE,  sev  knots  or  gr  of  neb
 7578   Gx 23 17.2   +18  41  s   Peg     1.6   14.  p vF,  am  vS  st
 7596   Gx 23 17.2   -06  55  r   Aqr                vF,  pS,  lE  0deg  ,  lbMN
I1477   Gx 23 17.2   -06  56  m   Aqr     0.6   15.  p F,  S,  r
 7575    * 23 17.3   +06  39  r   Psc                F,  S,  vlE
 7576   Gx 23 17.4   -04  44  s   Aqr     1.5   13.0   F,  S,  smbM
 7577   Gx 23 17.4   +07  22  r   Psc                *13.5  in  vF  neb
 7580   Gx 23 17.6   +14  00  s   Peg     0.9   15.  p vF,  pS,  R,  F*  sp
 7579   Gx 23 17.7   +09  25  r   Peg           15.  p eF,  vS,  stellar
 7586   Gx 23 17.7   +08  15  r   Peg           15.  p eF,  vS,  alm  stellar
 7581    - 23 17.8   +04  40  r   Psc                vF,  mE,  *12-  13  close  f;  =  7541?
 7588   Gx 23 17.8   +18  45  r   Peg           15.  p eF,  eS
 7583   Gx 23 17.9   +07  24  r   Psc           15.  p vF,  vS
 7604   Gx 23 17.9   +07  26  r   Psc           15.  p eF,  vS,  bM
I5303   D* 23 17.9   +00  16  F   Psc                vF,  S,  sbM  (D*  in  M?)
 7584   Gx 23 18.0   +09  25  r   Peg           15.  p eF,  vS,  stellar
 7585   Gx 23 18.0   -04  39  s   Aqr     2.3   11.7   pB,  pS,  iR,  gbM
 7587   Gx 23 18.0   +09  41  s   Peg     1.4   15.  p vF,  vS,  lE,  gbM
 7593   Gx 23 18.0   +11  21  r   Peg           14.  p F,  S,  R
I5305   Gx 23 18.0   +10  16  m   Peg     0.4   15.  p pF,  vS,  7594  nr
I5306       23 18.1   +10  15  d   Peg                vF,  S
I1478   Gx 23 18.2   +10  18  u   Peg     1.7   15.  p vF,  S,  dif
I5304       23 18.2   -10  18  d   Aqr                eF,  S,  R,  3  or  4  F  st  sp
I5307   Gx 23 18.2   +10  13  m   Peg     0.6   16.  p vF,  vS
 7594   Gx 23 18.3   +10  13  r   Peg           16.  p pF,  R,  3  st  p;  =  IC  5307
 7582   Gx 23 18.4   -42  22  s   Gru     4.6   10.6   pB,  L,  pmE,  gbM
 7589   Gx 23 18.4   +00  16  r   Psc           15.  p eF,  vS
 7591   Gx 23 18.4   +06  34  r   Psc           14.  p pF,  S,  R,  vgbM
 7592   Gx 23 18.4   -04  25  s   Aqr     1.4   14.  p eF,  vS
 7595   Gx 23 18.5   +09  54  r   Peg                F,  stellar
 7597   Gx 23 18.5   +18  41  v   Peg     1.3          eF,  vS,  gbM
 7598   Gx 23 18.5   +18  44  r   Peg           15.  p eF,  eS,  stellar
I1479   Gx 23 18.7   -10  25  m   Aqr     0.8   14.  p pF,  S,  R,  stellar
 7601   Gx 23 18.8   +09  14  s   Peg     1.5   15.  p pB,  dif
 7602   Gx 23 18.8   +18  42  v   Peg     0.6          eF,  eS,  stellar
I5301       23 18.8   -69  34  d   Ind                eeF,  eS,  vF,  *  f  1',  susp
 7590   Gx 23 18.9   -42  14  s   Gru     2.7   11.6   pB,  pL,  pmE,  gbM,  p  of  2
 7600   Gx 23 18.9   -07  35  s   Aqr     2.4   13.  p cF,  S,  R,  psmbM
 7605    - 23 18.9   +07  25  r   Psc                vF,  S,  R,  glbM;  =  7583?
 7603   Gx 23 19.0   +00  15  s   Psc     1.7   14.  p F,  vS,  stellar
 7607    - 23 19.0   +11  21  r   Peg                vF,  S,  R,  *16  nf  0'.5  (nebs?)
I1480   OC 23 19.0   +11  19  x   Peg                vS  Cl,  nebs?
 7606   Gx 23 19.1   -08  29  s   Aqr     5.8   10.8   pF,  cL,  pmE  0deg  +/-
I5309       23 19.2   +07  59  d   Psc                F,  S,  fan- shaped,  *  att  s

 7599   Gx 23 19.3   -42  15  s   Gru     4.4   11.4   F,  pL,  pmE,  gbM,  f  of  2
 7608   Gx 23 19.3   +08  20  r   Peg           15.  p vF,  pS,  lE,  lbM
I5308   Gx 23 19.3   -42  16  t   Gru     4.9   12.  p eeF,  S,  cE,  f  7599
I1481   Gx 23 19.4   +05  54  u   Psc     0.9   14.  p vF,  vS,  R
 7609   Gx 23 19.5   +09  29  s   Peg     1.5   15.  p vF,  vS,  gbM
 7616   Gx 23 19.5   +10  09  r   Peg                pF,  dif
 7610   Gx 23 19.6   +10  10  s   Peg     3.0   15.  p F,  S,  dif
 7611   Gx 23 19.6   +08  04  s   Psc     1.5   12.6   F,  S,  R,  triangle  with  2  st  19  n
I5302   Gx 23 19.6   -64  34  c   Tuc     1.3          vF,  vS,  2  st  nr,  susp
 7612   Gx 23 19.8   +08  33  r   Peg           14.  p pB,  vS,  R,  bM
 7618   Gx 23 19.8   +42  51  r   And           14.  p F,  S,  R,  gbM
 7613   Gx 23 19.9   +00  24  r   Psc                vF
 7615   Gx 23 19.9   +08  24  s   Peg     1.2   16.  p eF,  cS
 7614    - 23 20.0   +00  13  r   Psc                vF,  nf  of  2
 7620   Gx 23 20.1   +24  13  s   Peg     1.3   14.  p F,  S,  vlE
 7617   Gx 23 20.2   +08  10  s   Psc     1.0   13.8   eF,  vS
 7619   Gx 23 20.2   +08  12  s   Peg     2.9   11.1   cB,  pS,  R,  psbM
 7621   Gx 23 20.4   +08  20  r   Peg           15.  p eF,  vS,  stellar
 7624   Gx 23 20.4   +27  19  s   Peg     1.1   13.4   vF,  lE  or  iR,  dif,  vlbM
 7623   Gx 23 20.5   +08  24  s   Peg     1.9   12.4   F,  vS,  R,  psbM
 7625   Gx 23 20.5   +17  14  s   Peg     1.8   12.1   pB,  cS,  R,  smbM
I5311    * 23 20.6   +17  16  x   Peg                eF,  susp,  2'.5  nff  7625
 7626   Gx 23 20.7   +08  13  s   Peg     2.5   11.2   cB,  pS,  R,  psbM
 7635   Nb 23 20.7   +61  12  s   Cas   15.           vF,  *8  inv  l  excentric
 7628   Gx 23 20.8   +25  53  r   Peg           14.  p vF,  S,  R,  bM
I1482   Gx 23 20.8   +01  44  m   Psc     0.3   14.  p pB,  vS,  R
I5310       23 20.8   -22  09  d   Aqr                eF,  eS,  alm  stell,  *9.5  n  5'
I5312       23 21.0   +19  19  d   Peg                F,  S,  R,  gbM,  r
I5314   Gx 23 21.1   +19  17  m   Peg     0.5   15.  p F,  S,  R,  gbM,  r
I5315   Gx 23 21.3   +25  22  u   Peg     1.0   15.  p F,  vS,  like  neb  D*  15
 7629   Gx 23 21.4   +01  23  r   Psc           15.  p vF,  vS,  stellar
 7630   Gx 23 21.4   +11  24  r   Peg           15.  p F,  S
 7631   Gx 23 21.4   +08  13  s   Peg     1.9   14.  p vF,  vS
 7622    ? 23 21.6   -62  07  A   Tuc                cF,  eS,  am  5  st  (doubtful)
 7634   Gx 23 21.6   +08  52  s   Peg     1.5   14.  p F,  S,  F**   att
I5316       23 21.9   +21  13  d   Peg                vF,  vS,  R,  N,  stell
I5313   Gx 23 22.0   -42  29  c   Gru     2.5          eeF,  pL,  R,  *10  sp;  =  7632
 7632   Gx 23 22.1   -42  30  v   Gru                F,  S,  R,  lbM
 7640   Gx 23 22.1   +40  51  s   And    10.7   10.9   cF,  L,  mE  164deg  ,  vlbM,  r
 7636   Gx 23 22.3   -29  18  r   Scl           15.  p eF,  S,  R,  sbM
I1483   Gx 23 22.4   +11  18  m   Peg     0.6   15.  p F,  S,  lbM
 7627       23 22.5   +11  54  D   Peg                vF,  S,  mE,  2  st  n;  =  7641
 7638   Gx 23 22.5   +11  18  r   Peg           15.  p 1st  of  2  neb,  F,  S
 7641   Gx 23 22.6   +11  53  r   Peg           15.  p vF,  S,  iR,  dif,  lbM
I1484       23 22.7   +11  23  d   Peg                vF,  vS
I1485   Gx 23 22.7   +11  21  m   Peg     0.3   15.  p vF,  vS,  R,  vSN
 7639   Gx 23 22.8   +11  21  r   Peg           15.  p 2nd  of  2  neb,  F,  S
 7642   Gx 23 22.9   +01  26  r   Psc           14.  p vF,  vS,  bM
 7643   Gx 23 22.9   +11  59  r   Peg           15.  p F,  pS,  iR,  dif,  lbM
 7633   Gx 23 23.1   -67  39  c   Ind     2.1          F,  vS,  E  90deg  ,  psbM
I5317   Gx 23 23.4   +21  09  z   Peg           15.  p F,  S,  R,  gbMN,  r
 7645   Gx 23 23.7   -29  23  r   Scl           14.  p vF,  S,  R,  glbM
 7648   Gx 23 23.8   +09  39  s   Peg     1.9   14.  p vF,  pS,  lE,  bM;  =  IC  1486
I1486   Gx 23 23.8   +09  39  u   Peg     1.6   13.  p vF,  S
 7646   Gx 23 24.0   -11  52  r   Aqr                vF,  vS,  E  260deg   (neb?),  *9  n  3'.6
I5318   Gx 23 24.0   -11  53  m   Aqr     0.9   14.  p vF,  vS,  *9.5  p  1s
 7647   Gx 23 24.1   +16  47  r   Peg           15.  p eF,  cL(?),  p  a  row  of  st
 7654   OC 23 24.2   +61  35  s   Cas   13.     6.9   Cl,  L,  Ri,  mCM,  R,  st  9...13;  =  M52
 7649   Gx 23 24.3   +14  38  s   Peg     1.6   13.7   vF,  pL,  R
 7667   Gx 23 24.3   -00  07  r   Psc           14.  p vF
 7644   Gx 23 24.5   +13  58  r   Peg                vF,  pS,  lE
 7651   Gx 23 24.5   +13  58  r   Peg           15.  p eF,  S,  R
 7656   Gx 23 24.5   -19  05  r   Aqr           14.  p vF,  vS,  R,  bMN
I1487       23 24.6   +14  38  D   Peg                eeF,  pS,  iR,  F*  nf,  *7  p  15s  and  9'  s
I1488       23 24.8   +15  20  d   Peg                eF,  vS,  E  ns,  v  diffic,  7653  s
I5319       23 24.8   +14  00  d   Peg                eF,  eS,  *9.5  f,  7651  nr
 7653   Gx 23 24.9   +15  16  r   Peg           14.  p vF,  pS,  R,  gbM;  =  IC  1488
 7650   Gx 23 25.3   -57  48  r   Tuc                pF,  pS,  R,  glbM,  np  of  2
 7652   Gx 23 25.6   -57  54  r   Tuc                eF,  S,  R,  sf  of  2
 7660   Gx 23 25.7   +27  01  r   Peg           14.  p F,  vS,  psmbM,  *10  p
 7662   Pl 23 25.9   +42  33  s   And     2.2    9.  p !!!  PN  or  ring  ,  vB,  pS,  R,  blue,  variable
    Nucl
 7659   Gx 23 26.0   +14  12  r   Peg           15.  p vF,  vS,  R,  psbM
I5321   Gx 23 26.3   -17  58  m   Aqr     1.0   14.  p eF,  vS,  R,  *10  np  1'
 7637   Gx 23 26.5   -81  55  c   Oct     2.5          vF,  pL,  R,  vlbM,  *  nr
 7658   Gx 23 26.5   -39  14  r   Gru                D,  both  eF,  S,  R,  4  st  p
I1489   Gx 23 26.5   -12  31  m   Aqr     0.4   14.  p F,  vS,  R,  *9  south
 7664   Gx 23 26.6   +25  04  r   Peg           13.  p vF,  *  s,  2  st  11-  12  p
 7655   Gx 23 26.7   -68  02  A   Ind                group  of  st  (not  a  neb),  *10  p
 7657   Gx 23 26.7   -57  49  r   Tuc                eF,  R
 7663   Gx 23 26.7   -04  56  r   Aqr                vF
 7661   Gx 23 27.2   -65  16  c   Tuc     1.9          eF,  cL,  R,  vgvlbM
 7665   Gx 23 27.2   -09  24  r   Aqr           13.  p eF,  S,  stellar
 7668    - 23 27.2   -00  11  r   Psc                vF,  near  7667
 7669    - 23 27.2   -00  11  r   Psc                vF,  near  7667
 7670    - 23 27.2   -00  11  r   Psc                vF,  near  7667
 7671   Gx 23 27.3   +12  28  s   Peg     1.7   12.7   pB,  S,  R,  vsmbM,  *9  p
 7666    - 23 27.4   -04  11  r   Aqr                vF
I5320       23 27.4   -67  45  d   Ind                bM,  mag  14
 7672   Gx 23 27.5   +12  23  s   Peg     1.0   15.  p vF,  S,  5'  s  of  7671
I5322       23 27.5   -67  45  d   Tuc                bM,  mag  14
I5323   Gx 23 27.6   -67  49  c   Tuc     1.6          F,  S,  bM
 7673   Gx 23 27.7   +23  35  s   Peg     1.7   12.7   F,  S,  R
 7674   Gx 23 27.9   +08  47  s   Peg     1.2   14.  p F,  cS,  gbM,  p  of  2
 7675   Gx 23 28.0   +08  46  s   Peg     0.7   15.  p vF,  S,  R,  gbM,  f  of  2
 7677   Gx 23 28.1   +23  32  s   Peg     1.9   14.  p eF,  vS,  stell
I5324   Gx 23 28.3   -67  49  c   Tuc     1.3          F,  S,  bM
 7678   Gx 23 28.5   +22  25  s   Peg     2.3   12.2   vF,  pL,  vlE,  lbM,  am  4  st
 7680   Gx 23 28.5   +32  24  r   Peg           13.  p vF,  S,  R,  lbM,  r
 7681   Gx 23 28.6   +17  16  r   Peg           15.  p vF,  S,  iR,  r,  **   f
I5325   Gx 23 28.7   -41  19  s   Phe     2.5   12.  p F,  S,  R,  gbM,  *  sp  1'
 7679   Gx 23 28.8   +03  31  s   Psc     1.9   12.7   pB,  S,  R,  mbMN,  stell
I1497       23 28.8   +11  59  D   Peg                eF,  suspected
 7676   Gx 23 28.9   -59  43  r   Tuc                B,  S,  lE,  vsvmbM  *11
I1490       23 29.0   -04  08  d   Aqr                eF,  pS,  R,  vF*  close  n
 7682   Gx 23 29.1   +03  32  s   Psc     1.2   13.4   eF,  *14  p  13s  .7,  ln
 7683   Gx 23 29.1   +11  26  r   Peg           14.  p F,  *13  n
I1491   Gx 23 29.4   -16  18  m   Aqr     0.5   15.  p F,  S,  R
I5326   Gx 23 29.5   -28  48  m   Scl     0.8   14.  p eeF,  S,  mE,  *8  p
 7686   OC 23 30.2   +49  08  s   And   15.     5.6   Cl,  P,  lC,  st  7...11
I5327       23 30.3   -13  35  d   Aqr                pF,  pS,  *11  f  1'
 7684   Gx 23 30.5   +00  04  r   Psc           15.  p F,  vS,  stell
I1493       23 30.5   +14  27  d   Peg                F,  vS,  sbM,  another  susp  7s  p,  1'  n
 7685   Gx 23 30.6   +03  54  s   Psc     2.1   15.  p eF,  cL,  R,  gbM,  **   nr
I1492   Gx 23 30.7   -03  02  m   Psc     0.8   14.  p eF,  S,  R,  sp  of  2
I1496       23 30.7   -02  57  d   Psc                eeF,  pS,  R,  nf  of  2
I1494       23 30.8   -12  44  d   Aqr                F,  R,  lbM
I1495   Gx 23 30.8   -13  30  m   Aqr     1.0   13.  p F,  S,  lbM
 7687   Gx 23 30.9   +03  32  r   Psc           15.  p vF,  vS,  *11  f  1s  ,  n  85"
 7688   Gx 23 31.2   +21  24  r   Peg           15.  p F,  vS,  dif,  *11  201deg  ,  80"
I1498   Gx 23 32.0   -05  00  m   Aqr     1.4   14.  p eeF,  pS,  R,  *9.5  p  36s  ,  3'  s
I1499   D* 23 32.0   -13  27  F   Aqr                pB,  pL,  iF
 7691   Gx 23 32.6   +15  50  r   Peg           14.  p eF,  pL,  triangle  with  2  st  10
 7689   Gx 23 32.7   -54  05  s   Phe     2.8   12.  p pF,  L,  R,  vgbM
 7692   Gx 23 32.8   -05  36  r   Aqr           15.  p neb,  *9  f  18s  ,  73"  s
 7690   Gx 23 32.9   -51  41  s   Phe     2.8   13.  p cB,  S,  lE,  psbM,  *8  f
I5328   Gx 23 33.2   -45  02  s   Phe     2.5   12.  p vF,  S,  R,  bet  2  st
 7693   Gx 23 33.3   -01  17  r   Psc           14.  p S neb  or  neb*  14
 7695    - 23 33.3   -02  43  r   Psc                eF,  stell  (nr  7694)
I1500   Gx 23 33.3   +04  34  z   Psc           15.  p F,  vS,  E  ns,  lbM
I5329   Gx 23 33.3   +21  14  u   Peg     1.8   16.  p vF,  S,  E  250deg
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 7694   Gx 23 33.4   -02  42  r   Psc          14.  p eF,  pL,  stellar
I5330       23 33.5   -02  52  d   Psc               vF,  S,  bM,  others  nr
I5331   Gx 23 33.5   +21  08  u   Peg     1.1  15.  p F,  S,  fan,  gbM
 7696   Gx 23 33.9   +04  53  r   Psc          15.  p F,  S,  lE
 7698   Gx 23 34.0   +24  56  r   Peg          14.  p vF,  eS,  R,  bNSN
 7708    - 23 34.3   +72  55  r   Cep               Cl,  L,  P,  lC,  st  8,  10...15
 7699   Gx 23 34.4   -02  54  r   Psc               eF,  vS
I5332   Gx 23 34.5   -36  06  s   Scl     6.6  10.6   eeF,  vL,  bet  2 st,  D* p 45s
 7700   Gx 23 34.6   -02  57  r   Psc          14.  p vF,  eS,  stellar
 7701   Gx 23 34.6   -02  51  r   Psc          14.  p vF,  S,  R,  mbM,  *11  sp
I5334   Gx 23 34.7   -04  31  m   Aqr     1.5  14.  p neb  *10.5  (close  D*?)
 7707   Gx 23 34.8   +44  18  r   And          15.  p eF,  S,  R,  *9- 10  p vnr
I1501   Gx 23 34.8   -03  08  m   Psc     1.0  14.  p vF,  S,  dif
 7697   Gx 23 34.9   -65  24  A   Tuc               eeF,  pL  (certain)
 7703   Gx 23 34.9   +16  04  r   Peg          15.  p vF,  vS,  gbM,  *14  nf  1'
I5333   Gx 23 34.9   -65  24  c   Tuc     1.5       cB,  S,  dif,  susp;  = 7697
 7704   Gx 23 35.2   +04  54  r   Psc          15.  p eF,  *12  p,  sp  of  2
 7705   Gx 23 35.2   +04  48  r   Psc          15.  p eF
 7706   Gx 23 35.3   +04  59  r   Psc          14.  p vF,  pS,  *18  close  s,  nf  of  2
 7702   Gx 23 35.4   -56  00  s   Phe     1.9  12.2   B,  cS,  E,  g,  sbM,  *8- 9  p
 7709   Gx 23 35.4   -16  42  r   Aqr          13.  p pF,  S,  R,  lbM
 7711   Gx 23 35.7   +15  18  r   Peg          14.  p F,  S,  R,  psbM,  stellar
 7710   Gx 23 35.8   -02  53  r   Psc          15.  p pF,  vS,  stellar
I5335   Gx 23 35.8   -67  24  c   Tuc     1.3       F,  S,  susp
 7712   Gx 23 35.9   +23  36  r   Peg          13.  p vF
 7714   Gx 23 36.2   +02  09  s   Psc     2.1  13.  p pB,  S,  R,  psbM,  *12  sp,  *6  sf
I1502   Gx 23 36.2   +75  40  u   Cep     1.3  15.  p vF,  S,  vF*  close
I5336       23 36.3   +21  05  d   Peg               F,  S,  E  ns,  vlbM
 7715   Gx 23 36.4   +02  09  s   Psc     2.6  15.  p eF,  pL,  R
I5337   Gx 23 36.4   +21  09  v   Peg     0.9       F,  S,  R,  gbMN
 7713   Gx 23 36.5   -37  56  s   Scl     4.3  12.  p pB,  L,  E,  vgbM
 7716   Gx 23 36.5   +00  18  s   Psc     2.3  12.2   F,  pL,  lE,  gbM,  *10  s
I5338   Gx 23 36.5   +21  09  s   Peg     1.1  13.8   F,  S,  lE  ns,  gbMN
 7717   Gx 23 37.7   -15  07  r   Aqr          13.  p vF,  S
 7719   Gx 23 38.0   -22  58  r   Aqr               eF,  vS,  R
 7718   Gx 23 38.1   +25  41  r   Peg          15.  p vF,  S,  R
I5339   Gx 23 38.1   -68  27  c   Tuc     1.2       bM
I5341   Gx 23 38.4   +26  59  x   Peg               eF,  eS,  7720  nr
 7720   Gx 23 38.5   +27  02  s   Peg     1.9  12.6   F,  S,  lE,  bM,  am  st
I1503   Gx 23 38.5   +04  49  u   Psc     1.0  14.  p F,  S,  R,  gbM
I5340       23 38.6   -04  52  d   Aqr               eF,  *13  n  1'.5
I5342   Gx 23 38.6   +27  01  v   Peg     0.4       eF,  eS,  others  nr
 7726   Gx 23 38.7   +27  00  r   Peg          15.  p eeF,  pS,  R,  v  diffic
 7721   Gx 23 38.8   -06  31  s   Aqr     3.4  11.8   pF,  cL,  E  12deg  +/-  ,  vgbM
 7722   Gx 23 38.8   +15  57  r   Peg          13.  p pB,  pL,  R,  mbM
 7723   Gx 23 38.9   -12  58  s   Aqr     3.6  11.1   cB,  cL,  E,  gmbM,  r
 7724   Gx 23 39.1   -12  14  r   Aqr          13.  p eF,  pL,  iR
 7725   Gx 23 39.3   -04  32  F   Aqr          14.  p eeF
I5344       23 39.3   -04  58  d   Aqr               vF,  L,  others  nr
I5343   Gx 23 39.4   -22  31  m   Aqr     0.6  14.  p eF,  pS,  *7.5  sf  19s
I5345   Gx 23 39.6   -22  25  m   Aqr     0.5  14.  p vF,  vS,  R,  6'  n  of  IC  5343
 7727   Gx 23 39.9   -12  18  s   Aqr     4.2  10.7   pB,  pL,  iR,  mbM
 7728   Gx 23 40.0   +27  08  r   Peg          14.  p vF,  vS,  lE,  *10  sp
 7729   Gx 23 40.6   +29  11  r   Peg          14.  p vF,  S,  iE,  F*  inv  s
I5346   Gx 23 41.0   +24  57  z   Peg          16.  p F,  cS,  R,  gvlbM
I1504   Gx 23 41.3   +04  02  u   Psc     1.9  14.  p F,  pL,  E  pf,  gbM
 7730    - 23 41.4   -20  14  r   Aqr               pB,  pL,  E;  nonexistent?
I5347   Gx 23 41.5   +24  53  z   Peg          16.  p vF,  vS,  R,  sbM  *15
 7731   Gx 23 41.6   +03  45  s   Psc     1.7  14.  p F,  S
I1505       23 41.6   -03  34  D   Aqr               eeF,  pS,  R,  3  st  f,  diffic
 7732   Gx 23 41.7   +03  44  s   Psc     2.0  15.  p vF,  pL
 7735   Gx 23 42.3   +26  13  r   Peg          15.  p vF,  S,  vlE,  *13  nf,  vnr
 7736   Gx 23 42.4   -19  27  r   Aqr          14.  p eF,  eS,  gbM,  bet  2  st  12
 7733   Gx 23 42.6   -65  57  c   Tuc     1.4       eF,  S,  R,  p  of  2
 7734   Gx 23 42.7   -65  57  c   Tuc     1.6       eF,  cS,  R,  f  of  2
 7737   Gx 23 42.8   +27  03  r   Peg          15.  p vF,  S,  mbMN
 7740   Gx 23 43.3   +27  21  r   Peg          15.  p vF,  S,  lbN,  stellar
 7739    - 23 43.6   +00  28  r   Psc               s  of  2,  vnr
 7741   Gx 23 43.9   +26  05  s   Peg     4.0  11.4   cF,  cL,  iR,  D*  10- 12  np  2'
 7738   Gx 23 44.1   +00  31  s   Psc     2.2  14.  p vF,  n  of  2
 7742   Gx 23 44.3   +10  46  s   Peg     2.0  11.5   cB,  cS,  gmbM,  *12  f  72"
 7743   Gx 23 44.4   +09  56  s   Peg     3.1  11.2   pF,  S,  R,  *14  sf
 7745   Gx 23 44.8   +25  53  r   Peg               eF
I1506   Gx 23 44.8   +04  44  m   Psc     0.6  15.  p vF,  gbM
 7744   Gx 23 45.0   -42  55  s   Phe     2.3  13.  p cB,  S,  vlE,  svmbM  *14
 7748    - 23 45.0   +69  45  r   Cep               vL  neby,  surrounds  *7
I5348   Gx 23 45.0   -42  55  c   Phe     1.9       eF,  eS,  R;  = 7744
 7746   Gx 23 45.4   -01  41  r   Psc          14.  p eF,  pS,  R,  *  nr  s
 7747   Gx 23 45.6   +27  22  r   Peg          14.  p vF,  vS,  iR
I1507   Gx 23 45.6   +01  42  u   Psc     1.4  15.  p pB,  iF,  mbM
 7749   Gx 23 45.9   -29  33  r   Scl          14.  p vF,  S,  R,  gmbN,  *12  f
I1508   Gx 23 45.9   +12  04  v   Peg     2.0       F,  pL,  E  ns
I5349   Gx 23 46.3   -28  00  m   Scl     0.6  15.  p vF,  vS,  vmE  200deg  ;  neb  D*?
 7750   Gx 23 46.7   +03  47  s   Psc     1.8  14.  p cF,  pL,  vlE  0deg  ,  lbM,  *11  sf
 7751   Gx 23 47.0   +06  51  r   Psc          14.  p F,  S,  R,  gbM,  er
 7752   Gx 23 47.0   +29  27  s   Peg     0.7  14.  p F,  S,  lE,  p  7753
 7753   Gx 23 47.1   +29  29  s   Peg     3.4  13.  p cF,  cL,  vlE,  vglbM,  r

I1509   Gx 23 47.2   -15  17  m   Aqr     1.3  15.  p F,  S,  E  ns,  gbM
I5350   Gx 23 47.2   -27  58  m   Scl     0.3  15.  p eeF,  eS,  R,  *9  nr  f
I5355   Gx 23 47.2   +32  48  u   And     1.1  14.  p F,  pL,  E  ns,  gbM
I5351       23 47.3   -02  18  d   Psc               cF,  vS,  bM,  *10  sf  5"  +/-
I5352       23 47.4   -02  16  d   Psc               pF,  pS,  gbM
I5357       23 47.4   -02  18  d   Psc               pB,  R,  mbM
I5353   Gx 23 47.5   -28  07  c   Scl     1.6       eF,  S,  R,  *6  f
I5354       23 47.5   -28  08  d   Scl               eeF,  S,  R
I5356   Gx 23 47.5   -02  19  m   Psc     0.3  15.  p pF,  R,  mbM
I5358   Gx 23 47.7   -28  08  c   Scl     2.6       eF,  pS,  biN  20"
I5359   Gx 23 47.7   -02  17  m   Psc     1.0  15.  p F,  pS,  gbM,  *9.5  p  2'
 7755   Gx 23 47.9   -30  31  s   Scl     3.7  12.  p B,  cL,  R,  psmbM
I5360       23 47.9   -37  04  d   Scl               eeF,  cS,  R
 7756    * 23 48.5   +04  07  A   Psc               neb,  5'  sp  7757
 7757   Gx 23 48.8   +04  10  s   Psc     2.6  14.  p vF,  cL,  vlE,  vglbM,  2 st  13  n
 7758   Gx 23 48.9   -22  03  r   Aqr               eF,  vS,  iR,  sbM,  D*  10  nf  50s
 7759   Gx 23 48.9   -16  32  r   Aqr          14.  p vF,  S,  R,  lbM,  B*  n
 7754   Gx 23 49.2   -16  35  r   Aqr          15.  p eF,  vS
 7760   Gx 23 49.3   +30  58  r   Peg          15.  p cB,  vS,  R,  psbM,  *12  att
 7761       23 49.6   -13  23  D   Aqr          14.  p F,  vS,  R,  gbM,  *10  p  8';  nonexistent?
 7762   OC 23 49.8   +68  02  s   Cep   11.     10.  p Cl,  pRi,  pC,  st  11...15

 7763   Gx 23 50.3   -16  37  r   Aqr               eF,  vS,  R,  F*  f
I1510   Gx 23 50.7   +02  07  m   Psc     0.6  15.  p F,  S,  R,  biN
 7765   Gx 23 50.8   +27  10  r   Peg          15.  p vvF,  100"  np  7768
 7764   Gx 23 50.9   -40  44  s   Phe     1.5  12.3   B,  pL,  R,  gbM
 7766   Gx 23 50.9   +27  07  r   Peg          15.  p vF,  S,  85"  s  of  7768
 7767   Gx 23 50.9   +27  05  r   Peg          14.  p vF,  S,  lE,  *  p  19";  = IC  1511
 7768   Gx 23 50.9   +27  10  s   Peg     1.7  14.  p vF,  S,  E,  *  inv,  *  p  vnr
I1511       23 51.0   +27  05  x   Peg               eF,  susp  close  to  *12.5;  = 7767
I1512       23 51.0   +27  03  d   Peg               *13,  nebulous?
 7769   Gx 23 51.1   +20  09  s   Peg     1.8  12.1   pF,  pS,  R,  mbM
 7770   Gx 23 51.4   +20  06  s   Peg     1.0  15.  p vF,  vS,  iR,  s  of  2
 7771   Gx 23 51.4   +20  07  s   Peg     2.7  12.3   pB,  pL,  E  84deg  ,  bM,  n  of  2
I5361   Gx 23 51.4   -13  23  m   Aqr     0.4  14.  p vF,  vS,  bM,  stellar
I5362   Gx 23 51.6   -28  22  c   Scl     1.5       eeF,  pS,  *8  sf
 7772   OC 23 51.8   +16  15  r   Peg               Cl  of  sc  st  10m
 7774   Gx 23 52.2   +11  28  r   Peg          14.  p eF,  S,  R,  in  centre  of  3  st
I5363       23 52.2   -28  38  d   Scl               vF,  eS,  R,  3  st  in  line  p
 7773   Gx 23 52.3   +31  16  r   Peg          14.  p pF,  cS,  R,  *13  nf  nr
 7775   Gx 23 52.5   +28  46  r   Peg          14.  p vF,  pS,  lE,  glbM
 7776       23 52.7   -13  23  D   Aqr               eF,  vS,  lE,  gbM;  nonexistent?
 7777   Gx 23 53.3   +28  17  r   Peg          14.  p vF,  vS,  R,  bM
 7778   Gx 23 53.3   +07  52  r   Psc          14.  p cF,  S,  R,  psbM,  stellar,  1st  of  4
 7779   Gx 23 53.4   +07  52  s   Psc     1.6  14.  p pF,  S,  R,  psbM,  stellar,  2nd  of  4
I1513   Gx 23 53.5   +11  20  u   Peg     1.0  15.  p F,  vS,  E  pf,  gbM
 7780   Gx 23 53.6   +08  07  s   Psc     1.2  15.  p vF,  vS,  R,  lbM,  F*  inv
 7781   Gx 23 53.8   +07  51  r   Psc          15.  p F,  S,  R,  3rd  of  4
 7782   Gx 23 53.9   +07  58  s   Psc     2.4  13.  p pF,  pL,  lE,  glbM,  4th  of  4
 7783   Gx 23 54.2   +00  23  s   Psc     1.9  14.  p F,  S,  lE
I1514   Gx 23 54.2   -13  35  m   Aqr     0.8  15.  p vF,  S,  excent  N
 7784   Gx 23 55.3   +21  45  r   Peg          15.  p vF,  eS,  lbM,  r?,  p  of  2
 7785   Gx 23 55.3   +05  55  s   Psc     2.3  11.6   pB,  pS,  iR,  psbM,  r,  *8  p  4'.5
 7786   Gx 23 55.4   +21  35  r   Peg          14.  p pF,  pS,  lE,  vF  st  inv,  f  of  2
 7787   Gx 23 56.2   +00  33  r   Psc          15.  p vF,  S,  R
I1515   Gx 23 56.2   -00  59  v   Psc     1.2       eeF,  pS,  *9.5  inv,  bet  2  st
I5364       23 56.2   -29  04  d   Scl               vF,  pS,  R,  *8  sf
I1516   Gx 23 56.3   -00  55  v   Psc     1.6       vF,  pS,  R,  B*  sf,  nf  of  2
I1517   Gx 23 56.4   -00  17  z   Psc          15.  p eeF,  vS,  R,  3  st  p
 7788   OC 23 56.7   +61  24  s   Cas   9.      9.  p Cl,  S,  pRi,  vC,  st  10,  13...
 7789   OC 23 57.0   +56  44  s   Cas   16.     6.7   Cl,  vL,  vRi,  vmC,  st  11...18
I1518       23 57.1   +12  28  d   Peg               vF,  vS,  R
I1519       23 57.1   +12  28  d   Peg               F,  vS,  lbM,  stellar
I5365       23 57.6   -37  01  d   Scl               pB,  cS,  vmE,  *  sf
I5366    ? 23 57.7   +52  47  x   Cas               eL,  mE  (30'  by  10')
 7793   Gx 23 57.8   -32  35  s   Scl     9.1    9.1   like  a  comet
 7791   D* 23 58.0   +10  45  r   Peg               vF,  vS;  F*?
I1520   Gx 23 58.0   -14  02  m   Cet     0.5  14.  p vF,  pL,  R
 7792   Gx 23 58.1   +16  29  r   Peg          15.  p eF,  eS,  bM
 7790   OC 23 58.4   +61  13  s   Cas   17.     8.5   Cl,  pRi,  pC
 7794   Gx 23 58.6   +10  42  r   Peg          14.  p vF,  pS,  iR
 7795    - 23 58.7   +60  00  r   Cas               Cl,  vL,  P,  lC,  st  7,  10...
I5367       23 58.7   +22  26  d   Peg               F,  lE  120deg  ,  gbMN,  r
 7796   Gx 23 59.0   -55  27  s   Phe     2.3  12.  p pB,  cS,  R,  gmbM
 7797   Gx 23 59.0   +03  38  r   Psc          15.  p eF,  pS,  iR,  lbM
I1521       23 59.0   -07  09  d   Cet               vF,  S,  iF
I1522   Gx 23 59.1   +01  43  z   Psc          15.  p F,  S,  E  ns
I1523       23 59.1   +06  52  d   Psc               vF,  *4  3'  f
I1524   Gx 23 59.3   -04  09  v   Psc     1.9       no  description
I5368       23 59.3   +06  52  d   Psc               eF,  vS,  lbM,  3'  p  or  f  from  omega  Psc
 7798   Gx 23 59.4   +20  45  s   Peg     1.5  13.  p pF,  S,  R,  sbM,  *10  sp
I1525   Gx 23 59.4   +46  54  v   And     2.1       eF,  pS
 7799   Gx 23 59.5   +31  17  r   Peg               vF,  vS,  *16  close  p
 7800   Gx 23 59.6   +14  49  s   Peg     2.6  13.  p F,  pS,  E  39deg
 7807   Gx 23 59.6   -18  51  c   Cet     1.0       eF,  pS,  iF
I5369       23 59.8   +32  41  d   And               F,  S,  R,  N
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